TOSHIBA

FILE NO. 030-9915

SERVICE MANUAL

COLOUR TELEVISION

C9SS Chassis

50PJ98B, 50PJ98G

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TABLE OF CONTENTS

CHAPTER 1 GENERAL ADJUSTMENTS

SAFETY INSTRUCTIONS 3

CRT ASSEMBLY REPLACEMENT AND MOUNTING 4

PICTURE TUBE COMPONENTS ADJUSTMENT 6

SERVICE POSITION 9

SERVICE MODE 10

DESIGN MODE 13

ELECTRICAL ADJUSTMENT 14

CONVERGENCE ADJUSTMENT 17

SCREEN AND MIRROR ALIGNMENTS 22

CIRCUIT CHECKS 23

CHAPTER 2 SPECIFIC INFORMATIONS

SETTING & ADJUSTING DATA 24

LOCATION OF CONTROLS 25

CIRCUIT BLOCK DIAGRAM 27

MECHANICAL DISASSEMBLY 29

CHASSIS AND CABINET REPLACEMENT PARTS LIST 31

PC BOARDS BOTTOM VIEW 51

TERMINAL VIEW OF TRANSISTORS 66

SPECIFICATIONS 67

APPENDIX:

CIRCUIT DIAGRAM

CHAPTER 1 GENERAL ADJUSTMENTS

SAFETY INSTRUCTIONS

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" INSTRUCTIONS BELOW.

X-RAY RADIATION PRECAUTION

1. Excessive high voltage can produce potentially hazardous X-RAY RADIATION. To avoid such hazards, the high voltage must not be above the specified limit. The nominal value of the high voltage of this receiver is (A) kV at zero beam current (minimum brightness) under a (C) V AC power source. The high voltage must not, under any circumstances, exceed (B) kV.

   Refer to table-1 for high voltage (A), (B) & AC voltage (C). (See SETTING & ADJUSTING DATA on page 24)

   Each time a receiver requires servicing, the high voltage should be checked following the HIGH VOLTAGE CHECK procedure in this manual. It is recommended that the reading of the high voltage be recorded as a part of the service record. It is important to use an accurate and reliable high voltage meter.
2. The only source of X-RAY RADIATION in this TV receiver is the picture tube. For continued X-RAY RADIATION protection, the replacement tube must be exactly the same type tube as specified in the parts list.
3. Some part in this receiver have special safety-related characteristics for X-RAY RADIATION protection. For continued safety, parts replacement should be undertaken only after referring to the PRODUCT SAFETY NOTICE below.

SAFETY PRECAUTION

WARNING : Service should not be attempted by anyone unfamiliar with the necessary precautions on this receiver. The following are the necessary precautions to be observed before servicing this chassis.

1. An isolation transformer should be connected in the power line between the receiver and the AC line before any service is performed on the receiver.
2. Always discharge the picture tube anode to the CRT conductive coating before handling the picture tube. The picture tube is highly evacuated and if broken, glass fragments will be violently expelled. Use shatter proof goggles and keep picture tube away from the unprotected body while handling.
3. When replacing a chassis in the cabinet, always be certain that all the protective devices are put back in place, such as; non-metallic control knobs, insulating covers, shields, isolation resistor-capacitor network etc.

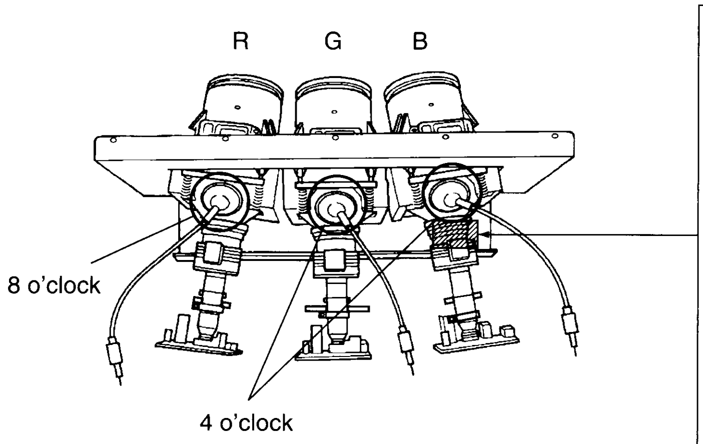
PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the international hazard symbols on the schematic diagram and the parts list.

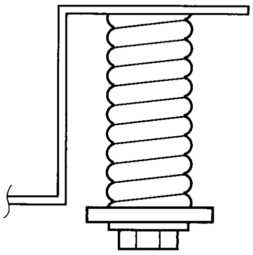
Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire, X-ray radiation or other hazards.

CRT ASSEMBLY REPLACEMENT AND MOUNTING

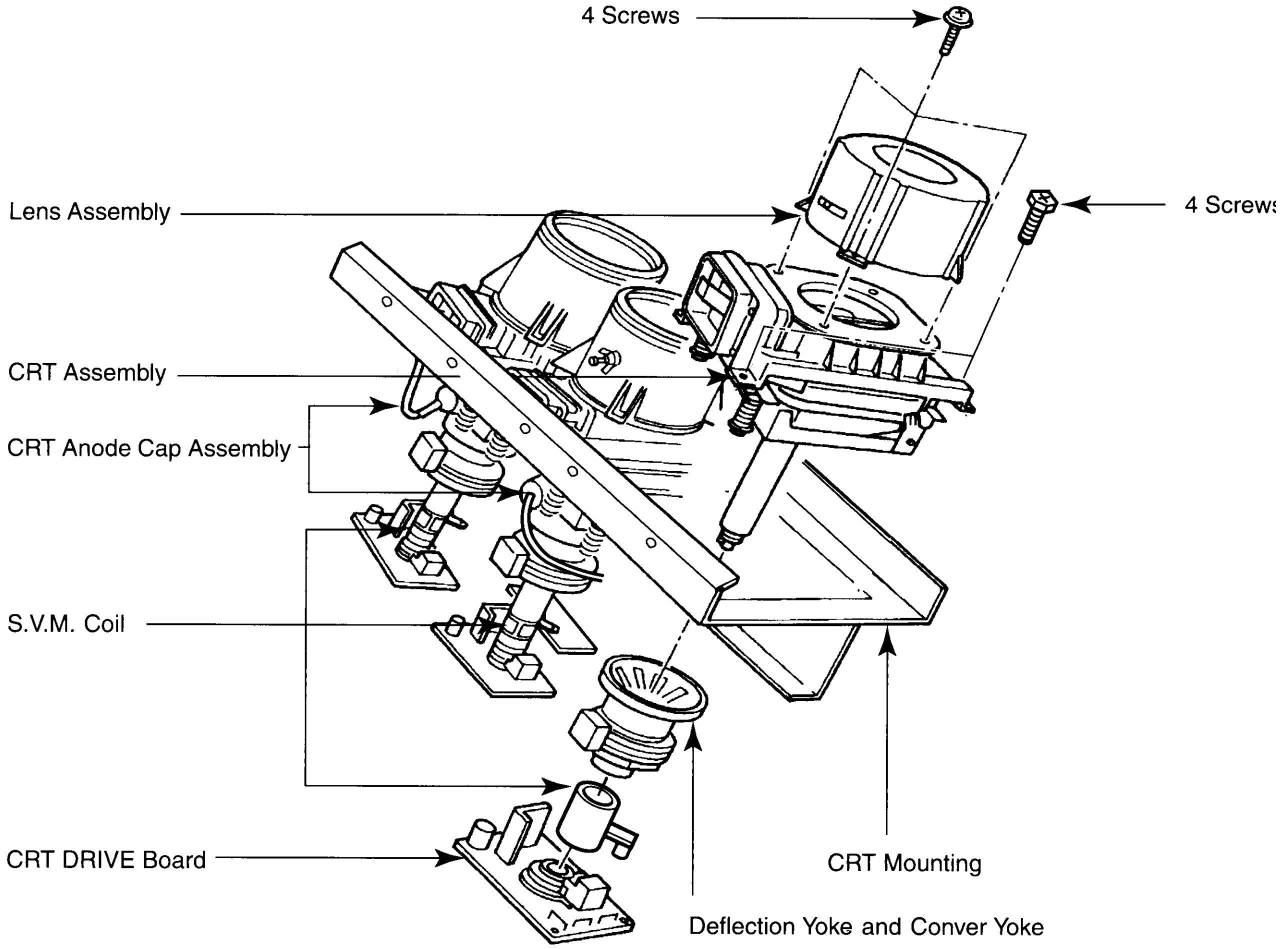
CAUTION : DO NOT LOOSEN THE HEX HEAD BOLTS WITH SPRINGS (12 PCS), BECAUSE THOSE ARE FOR SEALING OF CRT COOLANT.


R
G
B
8 o'clock
4 o'clock

Attention Serviceman



The Hex Head Bolts with Springs. (see sketch) used on CRT assembly, are "NOT" Adjustment Screws DO NOT LOOSEN-FLUID LEAKAGE WILL OCCUR.


4 Screws
Lens Assembly
4 Screws
CRT Assembly
CRT Anode Cap Assembly
S.V.M. Coil
CRT DRIVE Board
CRT Mounting
Deflection Yoke and Conver Yoke

Lens and Neck Components View

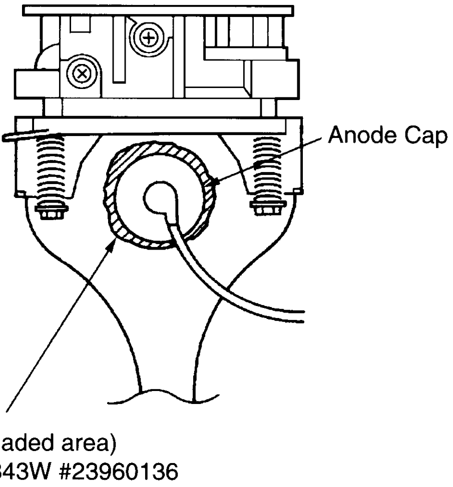
TO REMOVE CRT (Same procedure for R, G, B)

1. Remove CRT DRIVE Board, S. V. M. COIL and DEF. YOKE from CRT.
2. Remove Lens Assembly.
3. Detach CRT Anode Cap from CRT.
4. Remove CRT Assembly from CRT Mounting.

CRT REPLACEMENT (Same procedure for R, G, B)
Reverse the removal procedures except the followings.

1. Anode Cable should be replaced with new one. See "SERVICING PRECAUTIONS" shown below.
2. Install silicon (T461B) to the CRT, replace the Anode cable and put enough silicon again on around the Anode Cap as illustrated.

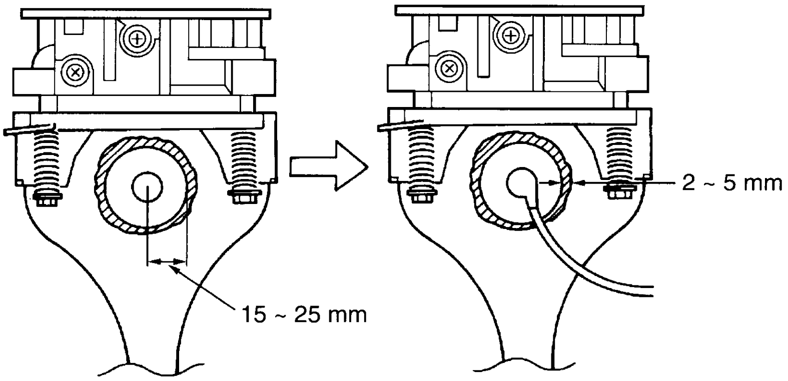
CAUTION: Align the Anode cable as illustrated on page 4.



ADJUSTING PROCEDURE IN REPLACING CRT

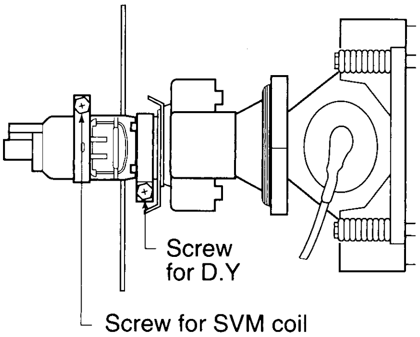
1. R.G.B. CUTOFF (SCREEN VR) ADJUSTMENT (page 6.)
2. R.G.B. FOCUS ADJUSTMENT (page 6.)
3. PICTURE TILT ADJUSTMENT (page 7.)
4. USER CONVERGENCE CENTER CHECK (Refer to owner's manual.)
5. CENTERING ADJUSTMENT (page 7.)
6. CONVERGENCE ADJUSTMENT (page 17.)
7. WHITE BALANCE ADJUSTMENT (page 14.)

Adjustments are complete.

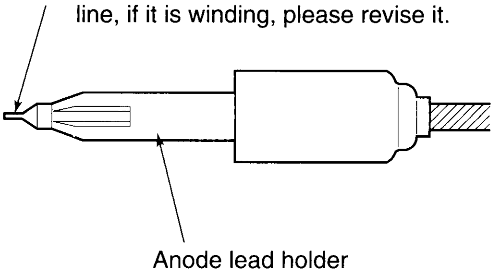


SERVICING PRECAUTIONS

- Do not use a magnetized screw driver for screws of Deflection Yoke and Velocity Modulation Coil to avoid magnetization of electron gun.
  Magnetization of electron gun will degrade basic function and result in unbalance of right and left shift of user static convergence, and result in no variable quantity.



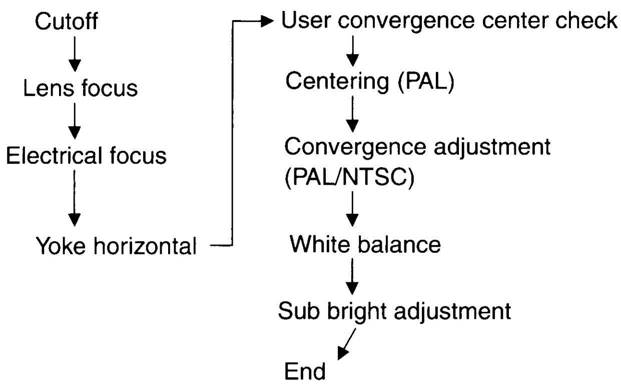
- When replacing the anode cap assembly (CRT) or anode lead assembly (F.B.T.), remove the anode lead holder from old one and attach the holder again to new anode lead.
- Check the point of anode lead in a straight line, if it is winding, please revise it.



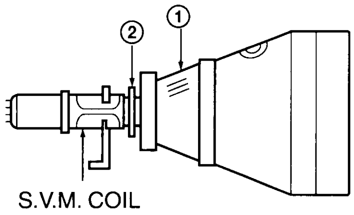
WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 3 OF THIS MANUAL.

PICTURE TUBE COMPONENTS ADJUSTMENT

ADJUSTING PROCEDURE IN REPLACING CRT



DESCRIPTION OF NECK COMPONENTS



① Deflection yoke and convergence yoke.
The position on the neck is required most front (CRT funnel side) and the screw is fastened after rotating yoke adjusting picture tilt.

② Centering magnet
After adjusting picture tilt, picture position is finally fixed by this magnet.
In order to get maximum margin of user convergence control for center of screen, this magnet have to be used for center convergence adjustment.

PREPARATION
Operate the receiver for at least 5 minutes.

R, G, B CUTOFF (SCREEN VR) ADJUSTMENT

1. Adjust before replace the screen assembly.
2. Set user control to reset position.
   (CONTRAST → Max
   BRIGHTNESS, COLOR, TINT → Center.)
3. Call up the adjustment mode display, then select the item RCUT.
4. Adjust the data of items **RCUT**, **GCUT**, and **BCUT** to "40H".
5. Press the -/-- button on Remote. (Y-MUTE : ON)
6. Gradually rotate R, G and B screen volume of FOCUS PAC clockwise or counterclockwise until the raster appears slightly on the CRT through the each lens, and leave them.
   (Lookin to the lens in order to check the raster.)
7. Press the -/-- button on Remote. (Return to Normal Picture)

RGB FOCUS ADJUSTMENT

1. Call-up the adjustment mode (see page 10)
2. Press -⊕ button on the remote controller in order to display the internally-generated cross-hatch (See TEST SIGNAL SELECTION on page 11.)
3. Expose only RED by covering the GREEN and BLUE lenses with caps.
4. Loosen the RED lens fixing screws (refer to Fig. a), and adjust the RED lens focus to obtain the sharpest point while observing the middle and peripheral sections of the screen.

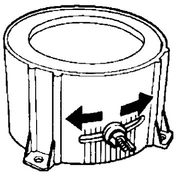


Fig. a

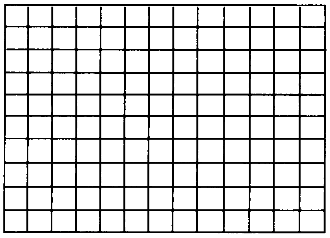
5. Use the focus VR of "R" of the focus pack in order to adjust the electric focus in the middle and peripheral sections of the screen to its sharpest level.
6. Check the RED focus of the whole screen and if necessary repeat steps 4 and 5.
7. Fix the RED lens by tightening its fixing screws.
8. Expose only GREEN by covering the RED and BLUE lenses with caps.
9. Display the internally-generated cross-hatch signal.
10. Adjust the GREEN lens focus on the left border of the screen to its sharpest level, then check the focus on the right border, and if it is at its sharpest level, fix it in that position by tightening the lens screws.

   (1) If the horizontal line toward the right border is red-flared, turn the lens screw slightly right in order to balance it with the left border. (After adjustment, the left border tends to be slightly green-flared, and the right border tends to be slightly red-flared.)
   (2) If the horizontal line toward the right border is green-flared, turn the lens screw slightly left in order to balance it with the left border. (After adjustment, the left border tends to be slightly red-flared, and the right border tends to be slightly green-flared.)

Note: The aim of the above-described adjustment procedure for the Green lens focus is to obtain the best lens focus after 2 - 3 hours of warming up taking into account the focus drift; it applies if the warming up time before the adjustment is less than 30 minutes. (The horizontal line in the screen middle section tends to be slightly red-flared.)

In case of warming up of more than 2 hours under a condition that the large anode current is running through the projection tube so that for example the all-white pattern appears, adjust to obtain the sharpest focus while observing the whole screen like in the RED case.

11. Press →○ button on the remote controller in order to display the internally-generated black cross-hatch. (See TEST SIGNAL SELECTION on page 11.)



12. Use the focus VR of "G" of the focus pack in order to adjust the electric focus in the middle section of the screen to its sharpest level.

Note: Normally the most clearly visible point of the scanning line is the sharpest point of the Green focus, however as the characteristics vary depending on the projection tube, the sharpest focus points of the vertical and horizontal lines may not match each other, thus when you turn the focus VR, if the picture tends to be tremendously unstable (rolls horizontally or vertically), adjust the balance of the vertical and horizontal lines to its best position.

13. Check the GREEN focus of the whole screen and if necessary repeat steps 10 and 11.
14. Fix the GREEN lens by tightening up its fixing screws.
15. Expose only BLUE by covering the RED and GREEN lenses with caps.
16. Press →○ button on the remote controller in order to display the internally-generated cross-hatch (See TEST SIGNAL SELECTION on page 11.)
17. Loosen the BLUE lens fixing screws (refer to Fig. a), and adjust the BLUE lens focus while observing the middle and peripheral screen sections.
18. Press →○ button on the remote controller in order to display the internally-generated black cross-hatch (See TEST SIGNAL SELECTION on page 11.)
19. Use the focus VR of "B" of the focus pack in order to adjust the focus in the middle section of the screen to its sharpest level.
    (The point of the Blue focus becomes sharpest when the brightness level of BLUE is lowest, the cross-hatch is clearly visible.)

Note: Keep in mind that only the BLUE electric focus is adjusted with the black cross-hatch.

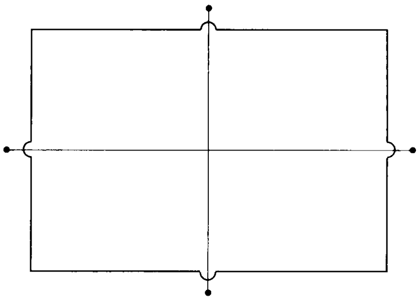
20. Check the BLUE focus of the whole screen and if necessary repeat steps 17 and 19.
21. Fix the BLUE lens by tightening its fixing screws.

TILT ADJUSTMENT

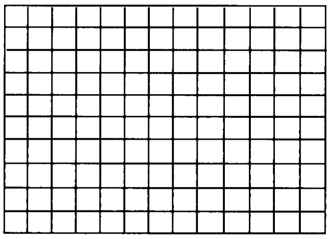
Rotate R, G, B deflection yoke so that picture becomes horizon, then fasten screw.

CENTERING ADJUSTMENT

1. Stretch a thread between two center slots of screen edge (top and bottom, left and right).



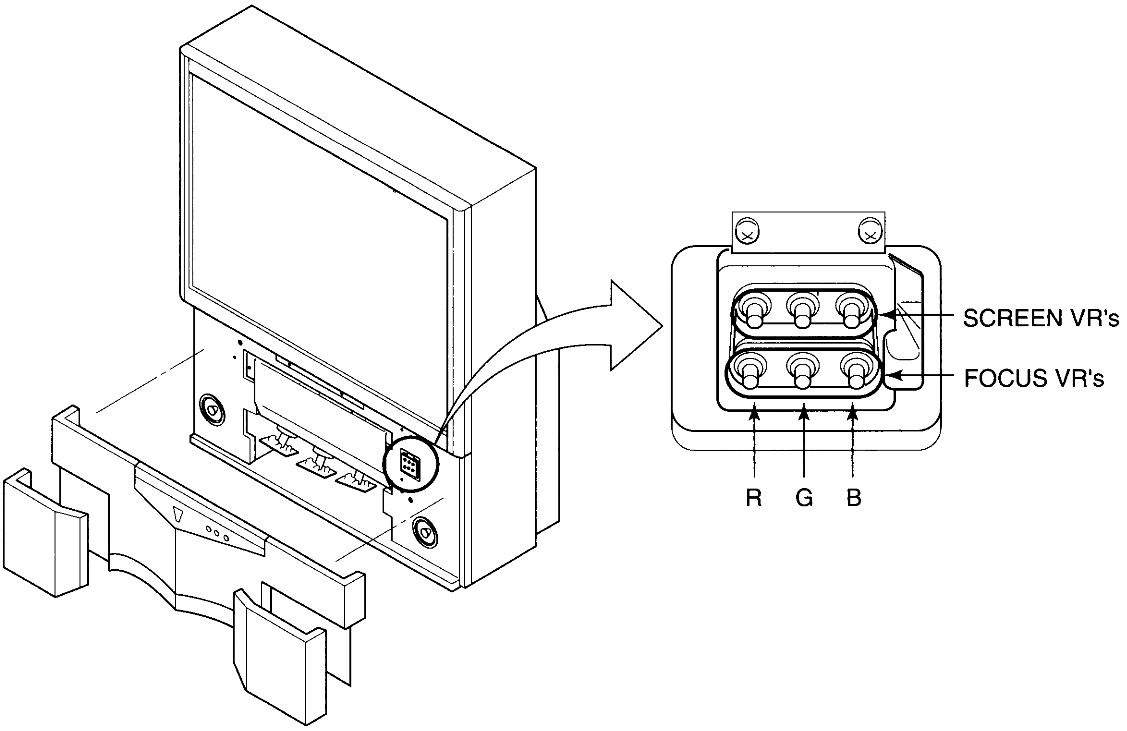
2. Select the adjustment mode. (See page 10.)
3. Press TV/VIDEO button on the Remote Control to display the black cross-hatch.



4. Adjust G centering magnet so that the cross-hatch pattern center comes to screen center.
5. Perform HEIGHT adjustment . (See page 14.)
6. Perform VERT. LINEARITY adjustment. (See page 14.)
7. Perform WIDTH adjustment. (See page 14.)
8. Check whole quality of green line.
9. Adjust R, B centering magnet so that the cross-hatch pattern center comes to screen center.

LOCATION OF SCREEN AND FOCUS VR'S

To remove the Speaker grille and Front panel.


SCREEN VR's
FOCUS VR's
R
G
B

REPLACEMENT OF HIGH VOLTAGE CABLE

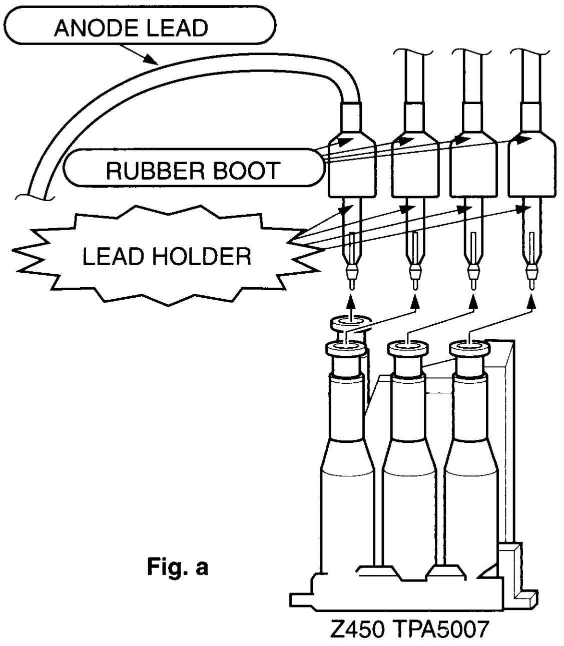
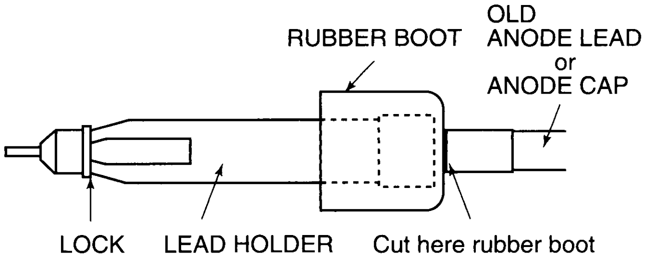

ANODE LEAD
RUBBER BOOT
LEAD HOLDER
Z450 TPA5007

Fig. a

1. When replacing Anode Lead or Anode Cap with new one, remove Lead Holder from old lead as shown in figure below, and put it on new lead. Do not throw away Lead Holder.

NOTE : THE LEAD HOLDER IS ATTACHED TO TPA5007 (Z450), BUT IS NOT ATTACHED TO ANODE LEAD AND ANODE CAP. RUBBER BOOT IS ATTACHED TO ANODE LEAD AND ANODE CAP.

2. Detaching Lead Holder


RUBBER BOOT
OLD ANODE LEAD or ANODE CAP
LOCK
LEAD HOLDER

Cut here rubber boot and lead together to detach Lead Holder.

Fig. b

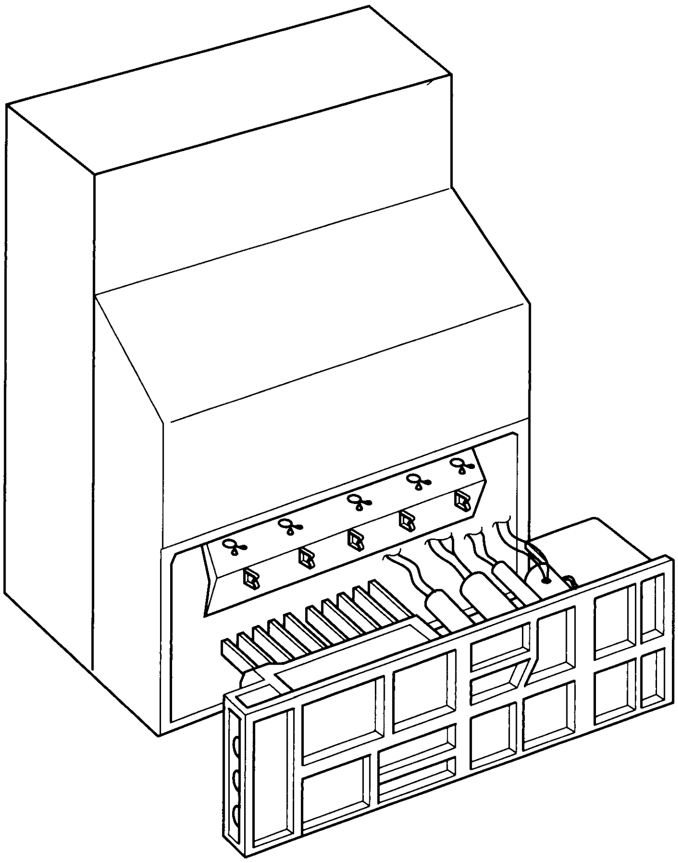
WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 3 OF THIS MANUAL.

SERVICE POSITION

In order to assure the performance, processed wires shall be replaced after the repair work.
Work procedures are as follows:

1. Remove the back board.
2. Remove lead wires.
3. Draw out the chassis.
4. Rest the chassis against the back cabinet, chassis as shown bellow.

After repair work finished, replace it in the opposite procedure.



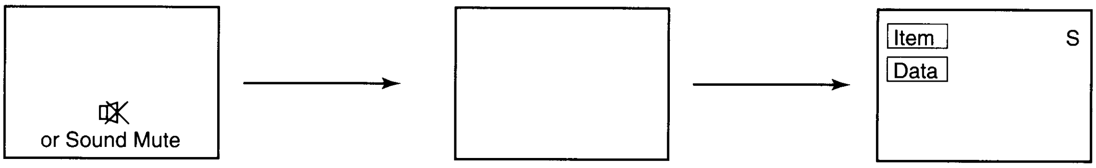
SERVICE MODE

1. ENTERING TO SERVICE MODE

1) Press 🔇 button once on Remote Control.

2) Press 🔇 button again to keep pressing.

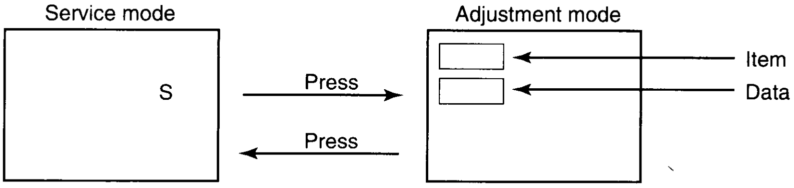
3) While pressing the 🔇 button, press MENU button on TV set



(Service mode display)

2. DISPLAYING THE ADJUSTMENT MENU

1) Press MENU button on TV.



3. KEY FUNCTION IN THE SERVICE MODE

The following key entry during display of adjustment menu provides special functions.

Screen adjustment mode ON/OFF:	-/-- button (on Remote)
Test signal selection :	→◯ button (on Remote)
Selection of the adjustment items :	Channel ▲/▼ (on TV or Remote)
Change of the data value :	Volume ◿ +/– (on TV or Remote)
Adjustment menu mode ON/OFF :	MENU button (on TV)
Initialization of the memory (QA02) :	CALL + Channel button on TV (▲)
Reset the count of operating protect circuit to “00”:	CALL + Channel button on TV (▼)
“RCUT” selection :	1 button
“GCUT” selection :	2 button
“BCUT” selection :	3 button
“SCNT” (or “CNTX”) selection :	4 button
“COLC” (or “SCOL”) selection :	5 button- - - - Color thickness correction
“TNTC” selection :	6 button
Convergence adj :	YELLOW button
Self diagnostic display ON/OFF :	9 button

note: Displayed differently as shown below, depending on the setting of the receiving color system.
COLP (PAL)
COLC (NTSC)
COLS (SECAM)

CAUTION : Never try to perform initialization unless you have changed the memory IC.

4. SELECTING THE ADJUSTING ITEMS

1) Every pressing of CHANNEL ▲ button in the service mode changes the adjustment items in the order of table-2. (▼ button for reverse order)

Refer to table-2 for preset data of adjustment mode.
(See SETTING & ADJUSTING DATA on page 24)

5. ADJUSTING THE DATA

1) Pressing of VOLUME ⊿ +/– button will change the value of data in the range from 00H to FFH. The variable range depends on the adjusting item.

6. EXIT FROM SERVICE MODE

1) Pressing POWER button to turn off the TV once.

■ INITIALIZATION OF MEMORY DATA OF QA02

After replacing QA02, the following initialization is required.

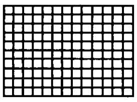
1. Enter the service mode, then select any register item.
2. Press and hold the CALL button on the Remote, then press the CHANNEL ▲ button on the TV. The initialization of QA02 has been complated.
3. Check the picture carefully. If necessary, adjust any adjustment item above.
   Perform "Auto search Memory" on the owner's manual.

CAUTION: Never attempt to initialize the data unless QA02 has been replaced.

7. TEST SIGNAL SELECTION

1) Every pressing of -⊙ button on the Remote Control changes the built-in test patterns on screen as described below in SERVICE MODE.

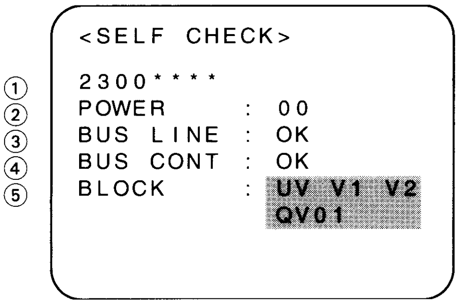
Signal off → NTSC signals (5 patterns)
↑ PAL signals (5 patterns) ←

Signals	Picture
• Red raster • Green raster • Blue raster • All White	
• Black cross-hatch	

* The signals marked with ▨ are not usable to display in the Test signal for some model.

8. SELF DIAGNOSTIC FUNCTION

1) Press “9” button on Remote Control during display of adjustment menu in the service mode.
   The diagnosis will begin to check if interface among IC’s are executed properly.
2) During diagnosis, the following displays are shown.



```
   <SELF CHECK>

①  2300****
②  POWER      : 00
③  BUS LINE   : OK
④  BUS CONT   : OK
⑤  BLOCK      : UV V1 V2
                QV01
```

① Part number of microcomputer (QA01)

② Operation number of protecting circuit ----“00” is normal.
When indication is other than “00”, overcurrent apts to flow, and circuit parts may possibly be damaged.

③ BUS LINE CHECK ----“OK” is normal.
“SDA1-GND” ------------- SDA-GND short circuit.
“SCL1-GND” -------------- SCL-GND short circuit.
“SCL1-SDA1” ------------- SCL-SDA short circuit.

④ BUS CONT ----“OK” is normal.
When indication shows “Q ○○○ NG”, the device with the number may possibly be damaged.

⑤ BLOCK
UV : TV reception mode
V1 : VIDEO 1 input mode (→○1)
V2 : VIDEO 2 input mode (→○2)

Indicated color of mode now selected : Green and Red
Indicated color of other modes : White

Green : Normal
Red : The microcomputer operates to provide judgement of no video signal. The red color is still indicated though the signal is input, failure may exist in input signal line including QV01.
QV01 : In case of indication green ---Normal
In case of indication red with input signal----
Failure may exist in output line including QV01.

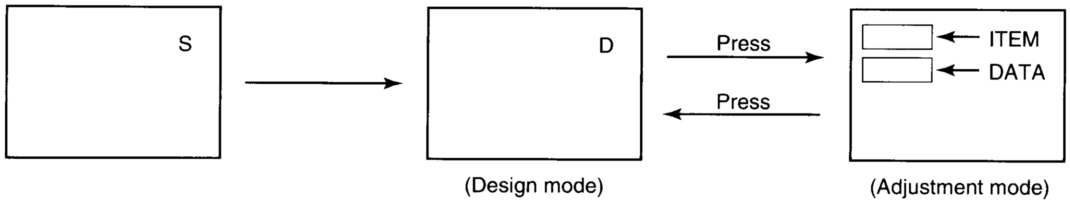
NOTE: Component which controls character display on screen is QT01 (TELETEXT IC.). If this display function fails to operate due to damage in QT01, self diagnosis procedure is as follows.
(1) In case that power indicator is blinking with interval of 0.5 seconds; it means protecting circuit (Current limiter) is operating, and circuit components may possibly be damaged. Check related components.
(2) In case that power indicator is blinking with interval of 1 second; Protecting circuit does not operate, but a part of Bus line does not operate normally. Check Bus line.

* The items marked with ▨ are not usable to display in the SELF DIAGNOSTIC FUCTION for some model.

DESIGN MODE

1. ENTERING TO DESIGN MODE

1) Select the Service mode.
2) While pressing CALL button on Remote and press MENU button on TV.
3) Press MENU button on TV.



When QA02 is initialized, items "OPT0" and "OPT1" of DESIGN MODE are set to the data of the representative model of this chassis family.

Therefore, because ON-SCREEN specification remains in the state of the representative of model. This model is required to reset the data of items "OPT0" and "OPT1".

2. SELECTING THE ADJUSTING ITEMS

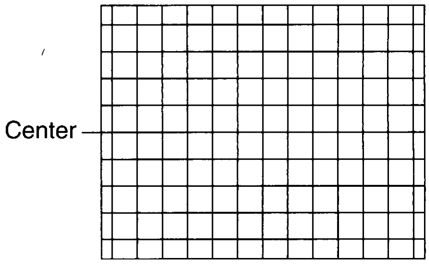
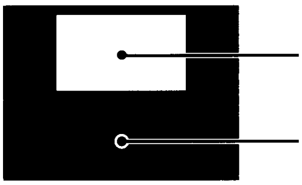
Every pressing of CHANNEL ▼ button in the design mode changes the adjustment items in the order of table-3. (▲ button for reverse order)

Refer to table-3 for data of design mode.
(See SETTING & ADJUSTING DATA on page 24)

3. ADJUSTING THE DATA

Pressing of VOLUME ▲ or ▼ button will change the value of data.

ELECTRICAL ADJUSTMENT

ITEM	ADJUSTMENT PROCEDURE
WIDTH (WID)	1. Call up the adjustment mode display, then select the item **WID**. 2. Press the VOLUME ▼ button to get the picture so the left or right edges of raster begins to lack. 3. Press the VOLUME ▲ button to advance the data by 10 steps. Note : Check the horizontal picture position is correct.
VERTICAL LINEARITY (VLIN)	1. Call up the adjustment mode display, then select the item **VLIN**. 2. Press the TV/VIDEO button on Remote until the cross-hatch pattern appears on the screen. 3. Press the VOLUME ▲ or ▼ button to obtain the picture of the best linearity 
HEIGHT (HIT)	1. Call up the adjustment mode display, then select the item **HIT**. 2. Press the VOLUME ▼ button to get the picture so the top or bottom of raster begins to lack. 3. Press the VOLUME ▲ button to advance the data by 11 steps. Note : Check the vertical picture position is correct.
WHITE BALANCE (RCUT) (GCUT) (BCUT) (RDRV) (BDRV)	Black and White pattern  High light area Adjust "RDRV" or "BDRV" to be white. Low light area Fine adjust "RCUT", "GCUT" or "BCUT" to be black. 1. Set user control to reset position. (CONTRAST → Max BRIGHTNESS, COLOR, TINT → Center.) 2. Call up the adjustment mode display, then select the item RCUT. 3. Adjust the data of items **RCUT**, **GCUT**, and **BCUT** to "40H". 4. Press the -/-- button on Remote. (Y-MUTE : ON) 5. Gradually rotate R, G and B screen volume of FOCUS PAC clockwise or counter-clockwise until the raster appears slightly on the CRT through the each lens, and leave them. (Lookin to the lens in order to check the raster.) 6. Press the -/-- button on Remote. (Return to Normal Picture) 7. Press the -⊙ button on Remote, and select the Black and White pattern. 8. Adjust the data of items **RCUT**, **GCUT** and **BCUT** for proper white-balanced picture in low light area. 9. Adjust the data of items **RDRV** and **BDRV** for proper white-balanced picture in high light area. 10. Check the white balance in both low and high light areas. If necessary, perform again steps from 8 to 9.

C9SS: Series (Reference factory adjustment)

Item	Name	Setting (User control)	Input signal	Measurement point	Adjustment procedure	Adjustment standard
[SCNT]	Sub-contrast	Reset 1 mode	Sub-bright signal (PAL-I signal)	Q501 (TP46B)	Adjust the amplitude from the pedestal level to the white peak.	2.7 ± 0.1 V p-p
[BRTC]	Sub-bright center	Reset 1 mode	Sub-bright signal	Screen adjustment	1) Adjust the number of collapsed black lines of sub-bright signal. 2) This adjustment shall be done after W/B [SCNT] adjustment.	4 ± 1.5 lines
[COLP]	Sub-color center PAL	Reset 1 mode	Sub-bright signal (PAL)	Q501 (TP46B)	1) Adjustment the colour bar amplitude. 2) Adjust the P-P value of the upper half.	1.25 ± 0.1 V p-p
[BELL]	BELL filter		SECAM colour bar	QQ01 (TMP01)	1) Adjust [BELL] so that the wavetorm on the synchroscope becomes flat. 2) Perform this adjustment at the white part.	100 ± 10 %
[SRY]	SECAM R-Y black level		SECAM colour bar	Q501 (TP02)	1) Adjust [SRY] so that the level of B/W signal becomes the same as the H.BLK level. 2) This adjustment shall be done after [BELL] adjustments.	0 ± 10 mV
[SBY]	SECAM R-Y black level		SECAM colour bar	Q501 (TP01)	1) Adjust [SBY] so that the level of B/W signal becomes the same as the H.BLK level. 2) The adjustment shall be done after [BELL] adjustments.	0 ± 10 mV
[COLS]	Sub-colour center SECAM	Reset 1 mode	SECAM colour bar	Q501 (TP46B)	1) Adjust the amplitude of colour bar. (Apply picture mute for this adjustment.) 2) Adjust the P-P value of the upper half.	1.95 ± 0.2 Vop
Screen adjustment	Screen	Factory screen adjsutment mode		CRT tube surface	1) Make the surrounding as dark as possible. 2) Set to the factory screen adjustment mode (Y mute, DRV. CUT= 40H) 3) Observing the CRT tube surface directly, adjust the screen VR to the point where the tube starts to be bright. 4) Perform this adjustment for each R, G and B tube.	Point where the tube starts to glow.
Focus adjustment	Focus	Reset 1 mode	RETMA (PAL-1)	Screen Adjustment	1) Repeat the electric focus and optical focus adjustments for the best position. 2) As to CRTs other than the one for the adjustment, shield them with a jig. 3) Perform this adjustment for each R, G and B tube.	
[RDRV] [BDRV]	White balance at bright part			Screen Adjustment	Adjust the colour temperature at the bright part (103cd/m^2).	8750K-0.002uv
[RCUT] [BCUT]	White balance at dark part			Screen Adjustment	Adjust the colour temperature at the dark part (17cd/m^2).	8750K-0.002uv

Item	Name	Setting (User control)	Input signal	Measurement point	Adjustment procedure	Adjustment standard
High voltage adjustment	High voltage	Reset 1 mode	Phillips pattern (PAL-I)	between T461 and Z450	Connect a high-voltage meter in between T461 and Z450, and adjust high voltage. (user adjustment standard)	30.7 ± 0.2 kV
Vertical position adjustment		Reset 1 mode	Phillips pattern (PAL-I)	Screen adjustment	1) Adjust the centering magnet so that the vertical position comes to the center of the dummy screen (cross pattern). 2) Do not change [VPOS] data.	
Horizontal position adjustment		Reset 1 mode	Phillips pattern (PAL-I)	Screen adjustment	1) Adjust the centering magnet so that the horizontal position comes to the center of the dummy screen (cross pattern). 2) Do not change [HPOS] data.	
[HIT] [VLIN]	Vertical amplitude adjustment	Reset 1 mode	Phillips pattern (PAL-I)	Screen adjustment	Adjust the vertical amplitude so that top and bottom flags disappear. (Align the vertical center of the pattern with the center mark of the mask.)	
[SHIT]	The frame of 16 : 9 adjustment	Reset 1 mode compression	Phillips pattern (PAL-I)	Screen adjustment	Adjust in the frame of 16 : 9 of the dummy screen.	
[WID]	Horizontal amplitude adjustme	Reset 1 mode	Phillips pattern (PAL-I)	Screen adjustment	Adjust the horizontal amplitude so that the left and right flags disappear.	

Unit adjustment : DIGITAL-CONVER

Item	Name	Setting (User control)	Input signal	Measurement point	Adjustment procedure	Adjustment standard
PLL frequency adjustment				Q709 emitter	1) Apply the following voltages to the respective terminals of P701. +5V to the terminals #15 and #16 +9V to the terminals #13 -9V to the terminals #14 2) By L719, adjust the frequency of the emitter Q709.	32 ± 0.1 kV

CONVERGENCE ADJUSTMENT

1. SCREEN ADJUSTMENT

The adjustment is carried out on four screens; 4 : 3 and 16 : 9 screens in both PAL and NTSC modes. When making the adjustments, feed an external signal to make an synchronization.

Note:

The convergence circuit is a circuit to eliminate screen distortion and can not make a drastic correction such as to correct entire screen size. An excessive correction may actuate the protection circuit. So a care will be necessary.

Before proceeding to the adjustment for each screen, always perform the adjustments for vertical size (HIT) and horizontal size (WID) with the main deflection data changed.

Order of the adjusting screens is PAL 4 : 3 → PAL 16 : 9 → NTSC 4 : 3 → NTSC 16 : 9.

The menu order is 1 → 2 → 3 → 1 → .... when the vertical sync is 50 Hz.

The menu order is 4 → 5 → 6 → 4 → .... when the vertical sync is 60 Hz.

1-1. Entering the Adjustment Menu

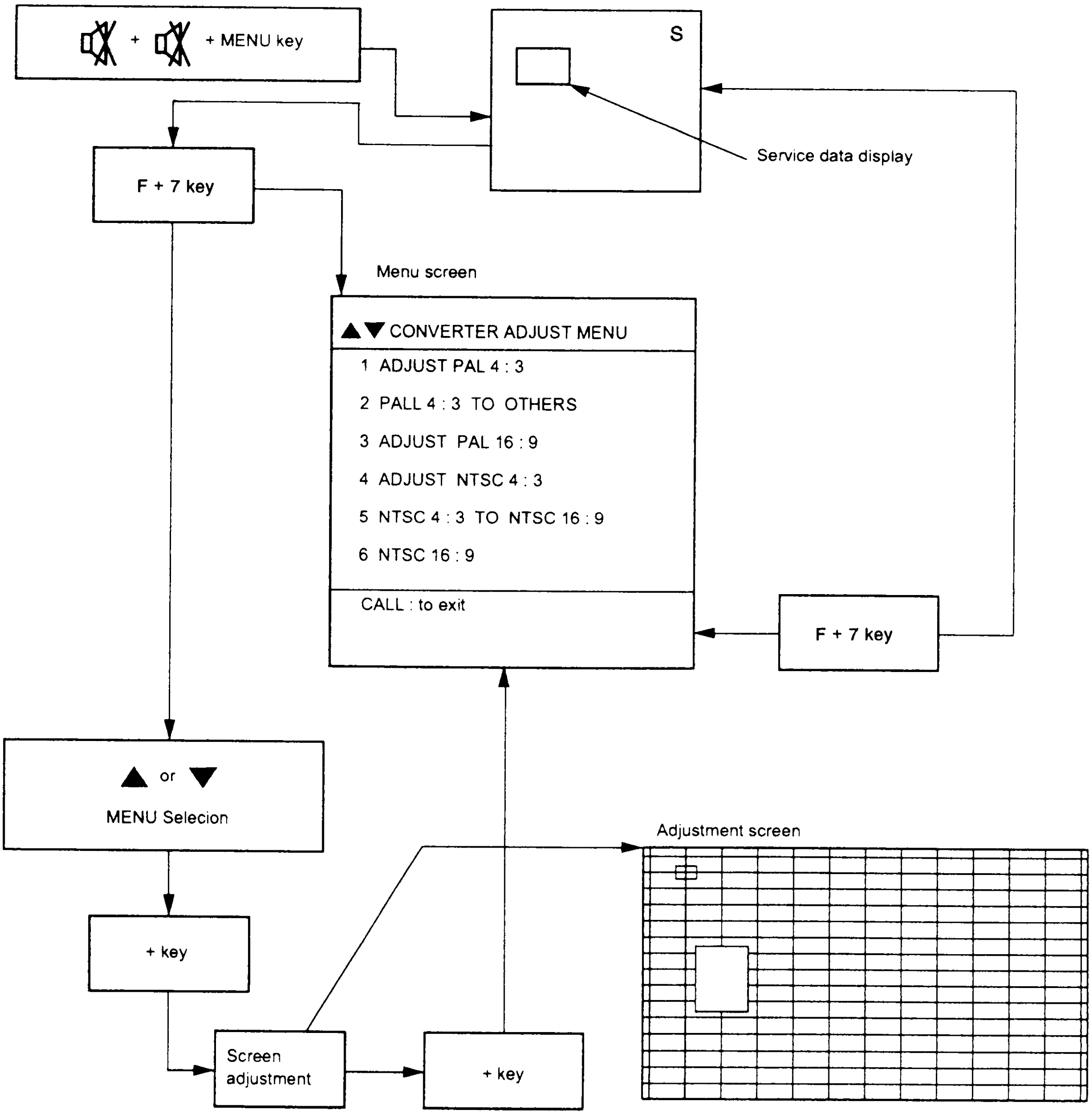
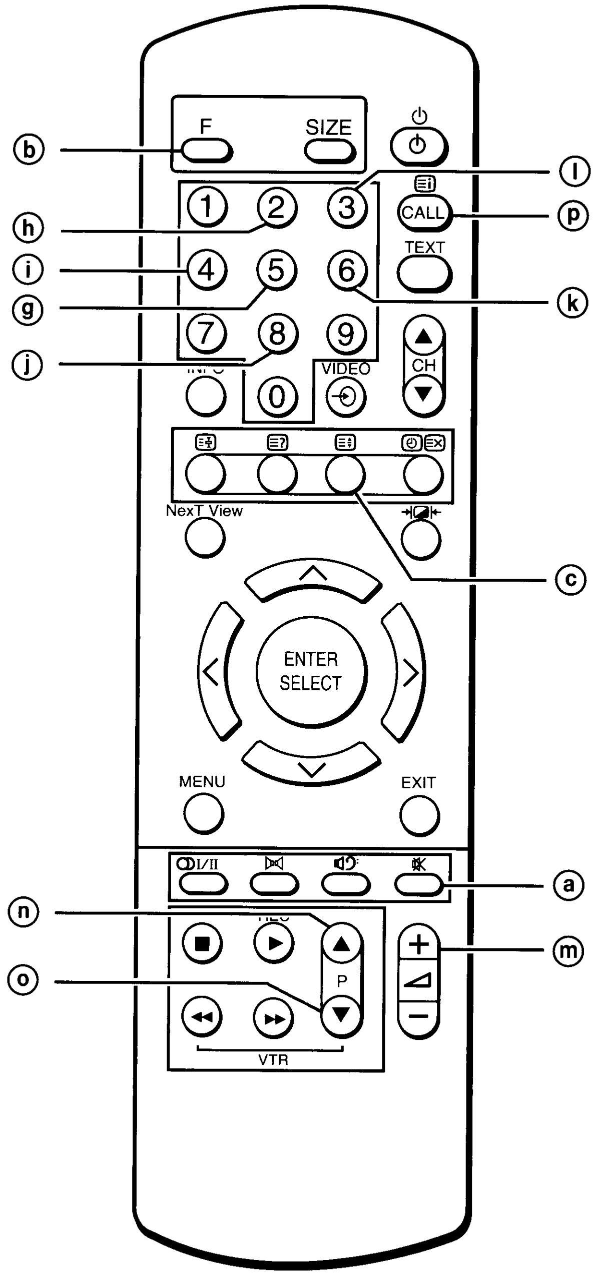

+ + MENU key
S
Service data display
F + 7 key
Menu screen
▲▼ CONVERTER ADJUST MENU
1 ADJUST PAL 4 : 3
2 PALL 4 : 3 TO OTHERS
3 ADJUST PAL 16 : 9
4 ADJUST NTSC 4 : 3
5 NTSC 4 : 3 TO NTSC 16 : 9
6 NTSC 16 : 9
CALL : to exit
F + 7 key
▲ or ▼
MENU Selecion
+ key
Adjustment screen
Screen adjustment
+ key

Fig. 1

1-2. Remote Control Key (Representative : 50PJ98G)


ⓑ
ⓗ
ⓘ
ⓖ
ⓙ
ⓛ
ⓟ
ⓚ
ⓒ
ⓐ
ⓜ
ⓝ
ⓞ
F
SIZE
1
2
3
4
5
6
7
8
9
0
CALL
TEXT
VIDEO
CH
NexT View
ENTER
SELECT
MENU
EXIT
I/II
P
VTR

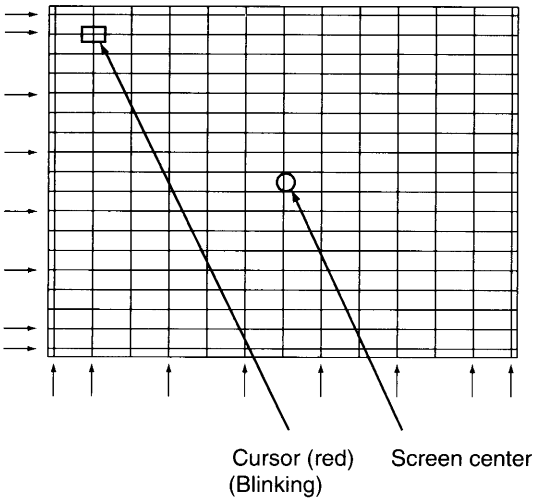
ⓐ 🔇 key	Push this key twice and the set console menu key to enter the service mode.
ⓑ F key	Push this key and yellow key to enter the convergence menu.
ⓒ Yellow or 7 key	Convergence menu key.
ⓖ 5 key	Cursor shift / data change mode change-over.
ⓗ 2 key	Cursor up / adjusting point up.
ⓘ 4 key	Cursor left / adjusting point left
ⓙ 8 key	Cursor down / adjusting point down
ⓚ 6 key	Cursor right / adjusting point right
ⓛ 3 key	Cursor colour change (Adjusting colour selection).
ⓜ + key	Execution key on convergence menu.
ⓝ ▲ key	Up key on convergence menu.
ⓞ ▼ key	Down key on convergence menu.
ⓟ CALL key	Termination key on convergence menu.

Fig. 2

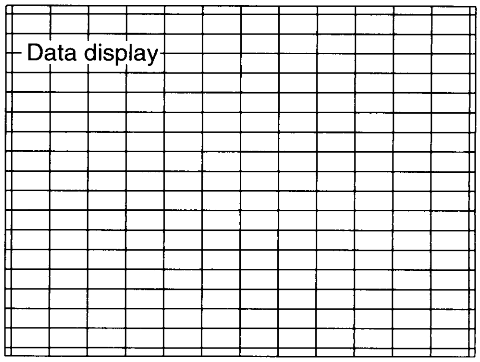
2. Picture

a) 50 Hz mode (PAL) . . . . Correcting point: Horizontal 8 x Vertical 8 (Arrow marks denote correcting point)

The first picture



The second picture



The first picture

Crosshatch pattern. Pattern colors are three color display. Cursor is blinking in red. When changed, condition is last memory state.

Cursor is .... Data change mode in lighting,
Cursor shifting mode in blinking.

Display color shows the color that data change is possible.

The second picture

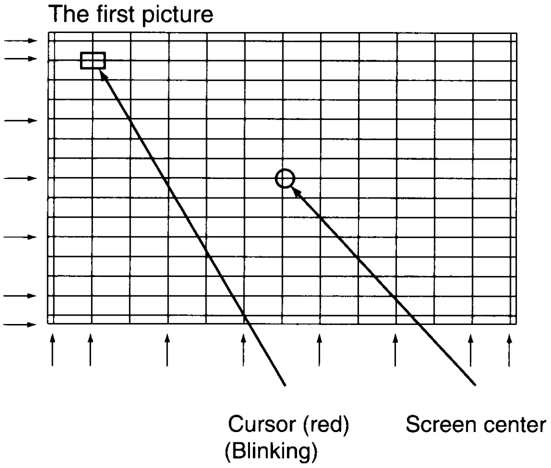
When entering from the first picture to the second picture, correcting wave of convergence is muted for one second.
During this period, the changed data is transferred from RAM Q701 to E2PROM Q713, and saved.

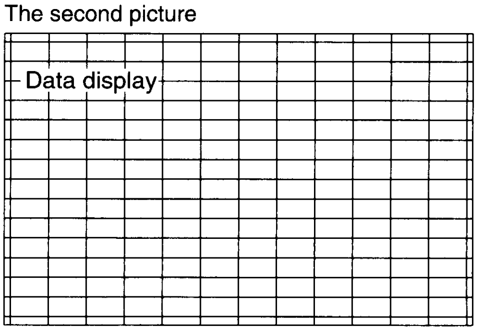
The second picture is indicated with data on top left of the first picture, therefore, convergence cannot be adjusted by this picture.

Caution:

- Receive suitable signal for adjustment. Centering of green picture can be done in 50 Hz mode (PAL).
- Centering of 60 Hz mode (NTSC) can be adjusted by convergence adjustment. Besides, decide the center by cross pattern of static convergence in menu, and adjust convergence from center to circumference.

b) 60 Hz mode (NTSC) .... Correcting point: Horizontal 8 × Vertical 7 (Arrow marks denote correcting point)





The first picture

Crosshatch pattern. Pattern colors are three color display. Cursor is blinking in red. When changed, condition is last memory state.

Cursor is .... Data change mode in lighting,
Cursor shifting mode in blinking.

Display color shows the color that data change is possible.

The second picture

When entering from the first picture to the second picture, correcting wave of convergence is muted for one second.

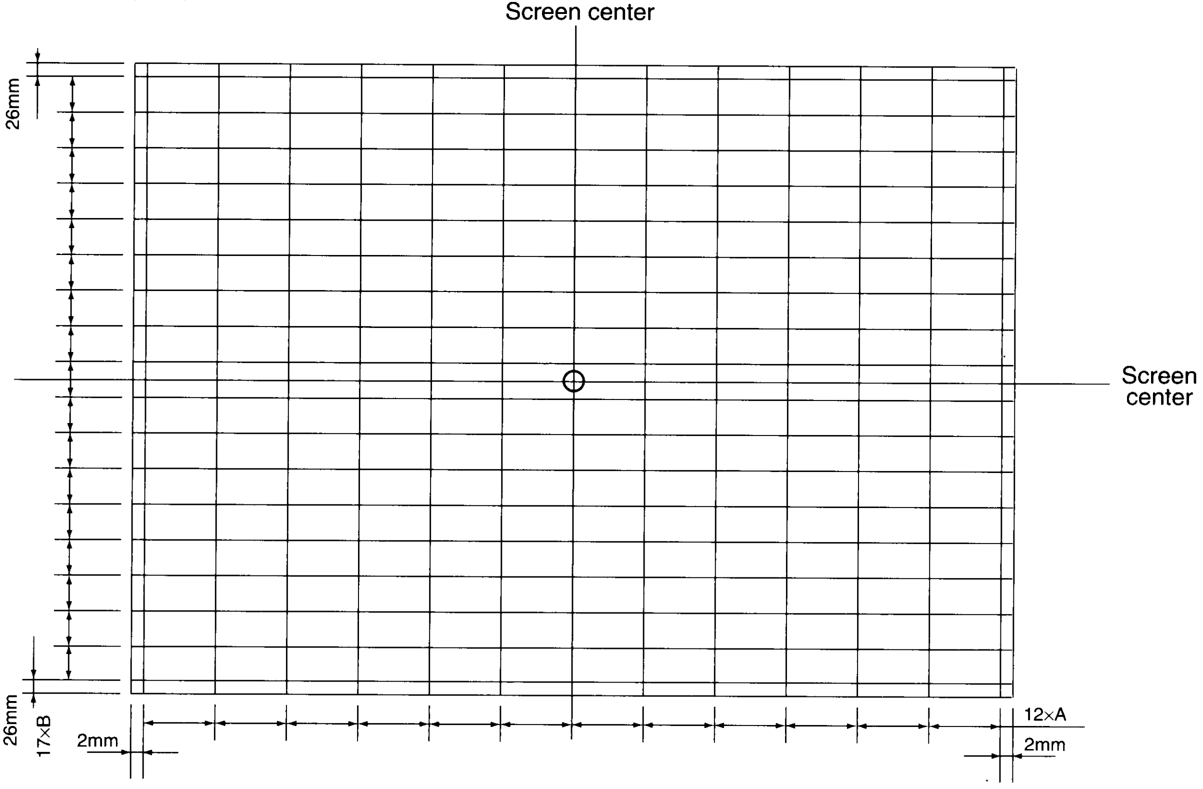
During this period, the changed data is transferred from RAM Q701 to E^{2}PROM Q713, and saved.
The second picture is indicated with data on top left of the first picture, therefore, convergence cannot be adjusted by this picture.

Caution:

- Receive suitable signal for adjustment. Decide the center by cross pattern of static convergence in menu, and adjust convergence from center to circumference.

3. ADJUSTING PICTURE DIMENSION (GREEN PICTURE)

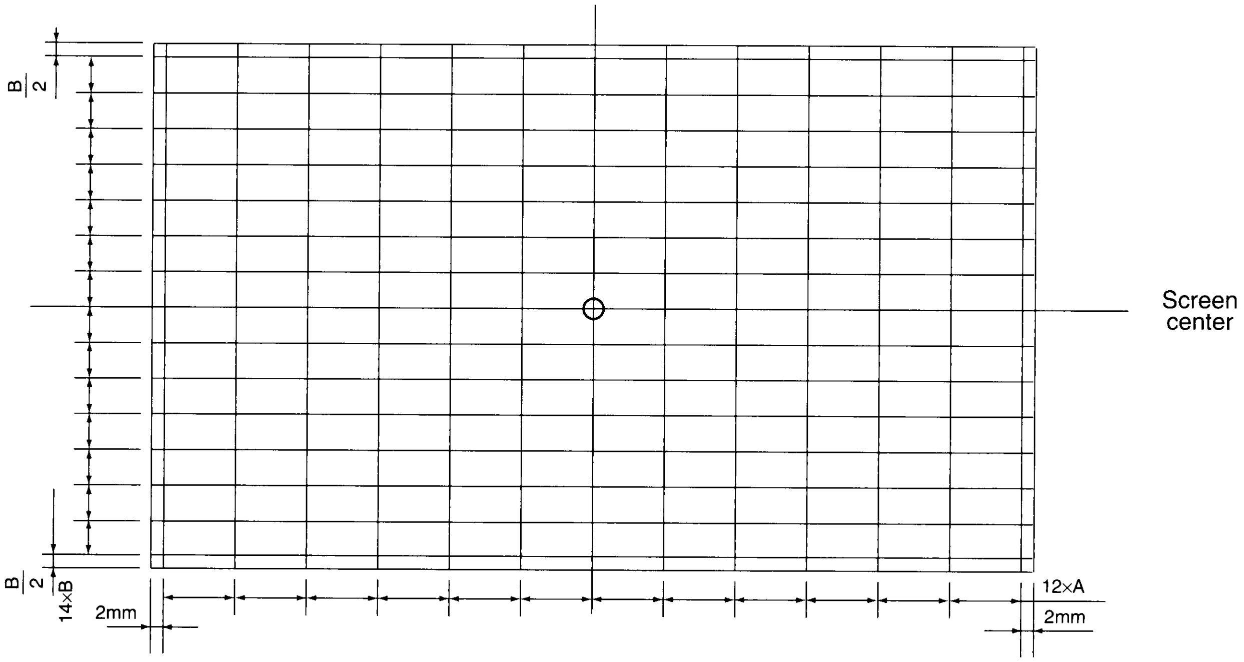
1.50 Hz mode (PAL)


Screen center
26mm
Screen center
26mm
17×B
2mm
12×A
2mm

○ mark: center

50 inches 4:3 Screen size: Horizontal 1014mm, Vertical 760mm
Dimension A: 84mm, Dimension B: 41.5mm

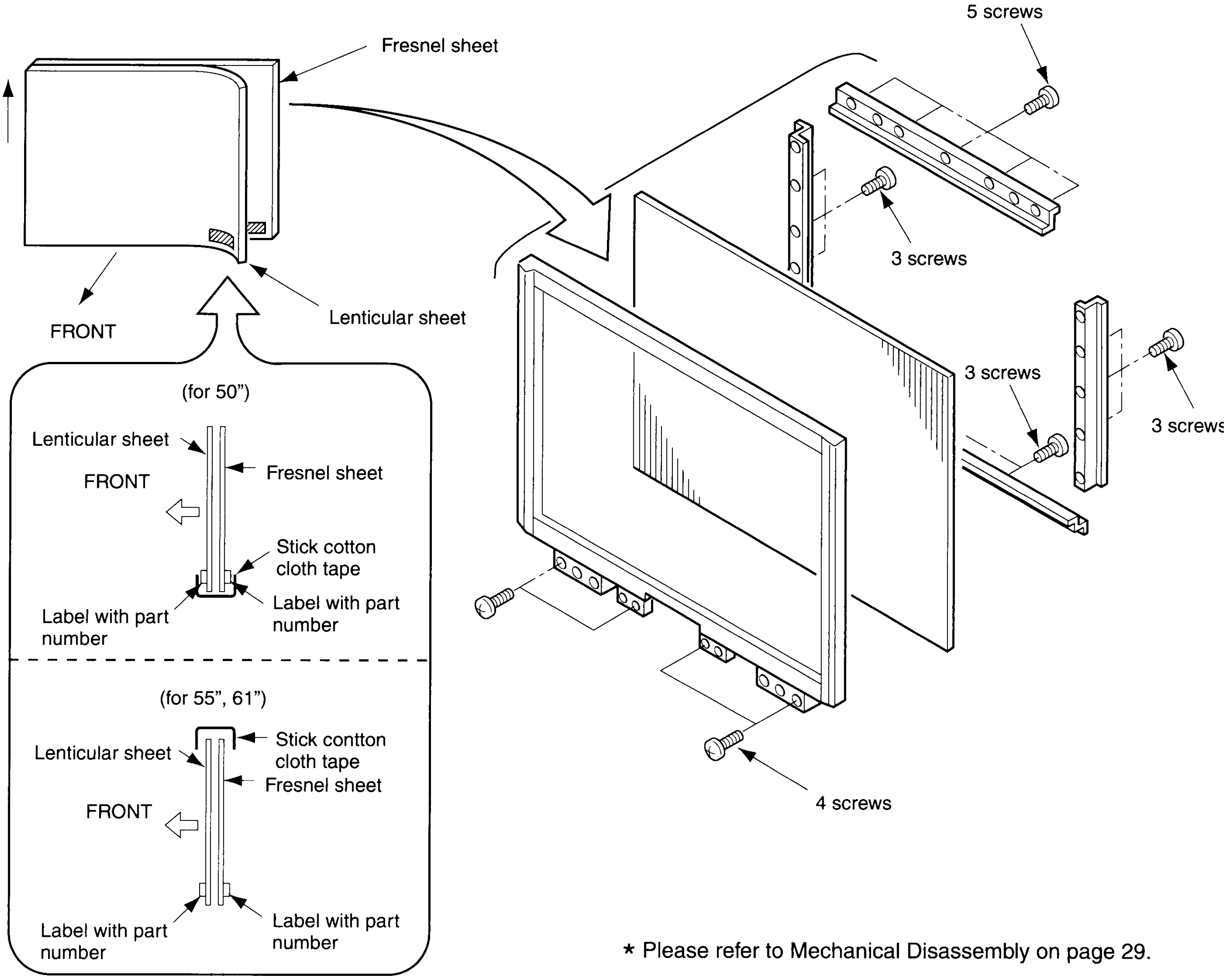
2. 60Hz mode (NTSC)


B/2
Screen center
B/2
14×B
2mm
12×A
2mm

50 inches 4:3 Screen size: Horizontal 1014mm, Vertical 760mm
Dimension A: 84mm, Dimension B: 50.5mm

SCREEN AND MIRROR ALIGNMENTS

ASSEMBLING AND MOUNTING OF FRONT SCREEN


5 screws
Fresnel sheet
3 screws
FRONT
Lenticular sheet
3 screws
3 screws
(for 50")
Lenticular sheet
FRONT
Fresnel sheet
Stick cotton cloth tape
Label with part number
Label with part number
(for 55", 61")
Stick contton cloth tape
Lenticular sheet
Fresnel sheet
FRONT
Label with part number
Label with part number
4 screws

* Please refer to Mechanical Disassembly on page 29.

CLEANING OF LENS AND MIRROR

CAUTION : Do not hold the optical system parts (lens and mirror) with bare hand to avoid finger-prints on the surface of those parts.

HOW TO CLEAN LENS AND MIRROR

1. Be sure to remove sand dust with an air brush, etc.
2. When it is stained slightly, breathe upon it and wipe away with the specified cleaning cloth.
   For other stains than the above, wipe the stains away with the specified cloth into which a cleaning liquid has been soaked.

Cleaning liquid .... **LENS LUSTER** (Manufactured by Edmund Scientific Co.), etc.

HOW TO CLEAN SCREEN

When cleaning the screen, use a soft cloth so as not to damage the screen.

1. Wipe the stain away with a diluted neutral detergent soaked cloth.
2. Wipe the detergent away with a water soaked cloth.
3. Wipe the screen with a dry cloth to remove moisture on the screen.

Note : Absolutely do not use alcohol, benzine, thinner, etc. for cleaning in order not to wipe away the black print on the surface.

CIRCUIT CHECKS

HIGH VOLTAGE CHECK

CAUTION: There is no HIGH VOLTAGE ADJUSTMENT on this chassis. Checking should be done following the steps below.

1. Connect an accurate high voltage meter to the anode of the picture tube.
2. Turn on the receiver. Set the BRIGHTNESS and CONTRAST to minimum (zero beam current).
3. High voltage must be measured below (B) kV.

   Refer to table-1 for high voltage (B).
   (See SETTING & ADJUSTING DATA on page 24)
4. Vary the BRIGHTNESS to both extremes to be sure the high voltage does not exceed the limit under any conditions.

CAUTION:
When the following parts fail, check the High Voltage after replacing.

Location No.	Name	Name
T461	Flyback Trans.	TFB3078BD
D489	Zener Diode	MTZJ3.6B
Q480	Transistor	2SC2023
Q483	IC	TA7508P(J)
R435	Resistor	33k ohm, ±5%
R489	Resistor	3.3k ohm, ±5%
R490	Resistor	3.3k ohm, ±5%
R450	VR	1k ohm
C440	Capacitor	1000pF, ±3%
C443	Capacitor	6800pF, ±3%
C444	Capacitor	5100pF, ±3%

ANODE VOLTAGE MEASURING METHOD

CAUTION: Take extra precaution when measuring this high voltage. High voltages are also present in surrounding circuit boards (CRT DRIVE assembly, DEFLECTION assembly, and POWER SUPPLY assembly).

1. Disconnect the FBT anode cable as outlined below. Measure high voltage at the point where the cable enters the FBT.
2. Holding the rubber cover firmly, turn it counterclockwise and check that the lock has been disengaged. (See Fig. b on page 8.)
3. Determine the extent of the rubber cover before disconnecting the cable.
4. Pull straight up the anode cable to disconnect.
5. When reconnecting the cable, proceed in the reverse order.
   After reconnecting, tug on the cable to check that it is secure.

CHAPTER 2 SPECIFIC INFORMATIONS

SETTING & ADJUSTING DATA

SAFETY INSTRUCTIONS

		50"
HIGH VOLTAGE AT ZERO BEAM:	(A)	31.9 kV
MAX HIGH VOLTAGE:	(B)	32.5 kV
AV VOLTAGE	(C)	110~240 V

Table-1

SERVICE MODE

ADJUSTING ITEMS AND DATAS IN THE SERVICE MODE:

Item	Adjustment	Reference data
RCUT	R CUTOFF (B/W)	40H
GCUT	G CUTOFF (B/W)	40H
BCUT	B CUTOFF (B/W)	40H
RDRV	R DRIVE	40H
BDRV	B DRIVE	40H
CNTX	SUB CONTRAST MAX	7FH
BRTC	SUB BRIGHT CEN	80H
COLC	SUB COLOR CEN NTSC	15H
TNTC	SUB TINT CEN	48H
COLP	SUB COLOR CEN PAL	39H
COLS	SUB COLOR CEN SECAM	39H
COLD	SUB COLOR CEN DTV	00H
SCOL	SUB COLOR	07H
SCNT	SUB CONTRAST	10H
BELL	SECAM BELL FILTER	80H
SRY	SECAM R-Y	08H

Item	Adjustment	Reference data
SBY	SECAM B-Y	08H
HPOS	50Hz H-POSITION	0EH
VPOS	V-POSITION	06H
HIT	HEIGHT	52H
GMPS	V-POSITION (RASTER)	37H
VLIN	V-LINEARITY	13H
VSC	V-S CORRECTION	08H
VPS	V-SHIFT	15H
VCP	V-COMPENSATION	02H
WID	PICTURE WIDTH	1FH
PARA	E-W PARABOLA	05H
CNR	E-W CORNER	00H
TRAP	TRAPEZIUM	0BH
HCP	H-COMPENSATION	02H
VFC	V-F CORRECTION	0FH

Table-2

DESIGN MODE

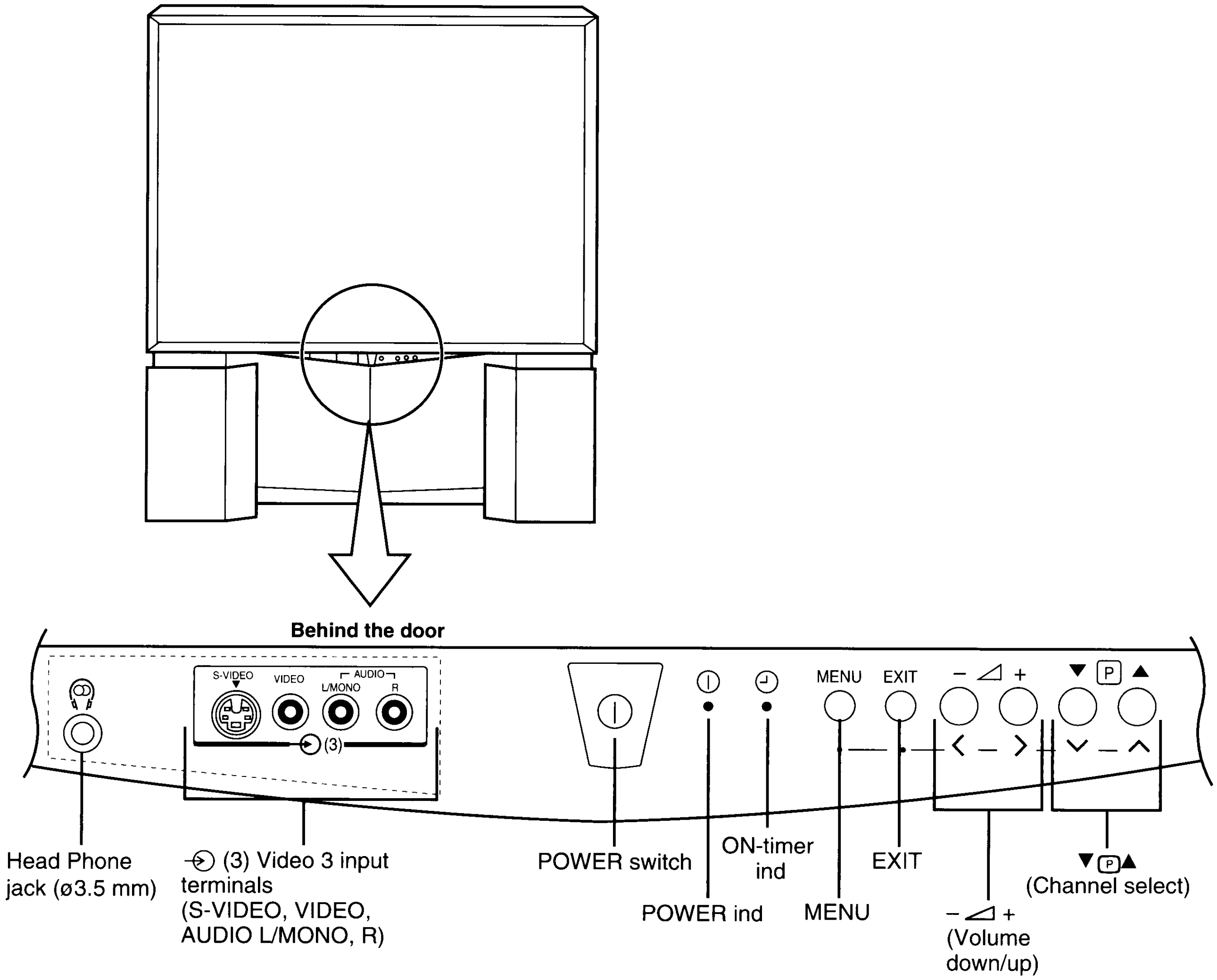
ADJUSTING ITEMS AND DATAS IN THE DESIGN MODE:

Item	Name of adjustment	Preset Data	50PJ98B	50PJ98G	Remarks
RCUT					
OPT1	OPTION 1	48H	48H	48H	
OPT0	OPTION 0	81H	81H	80H	
OSD					
.					
.					
.					
.					
RCUT					

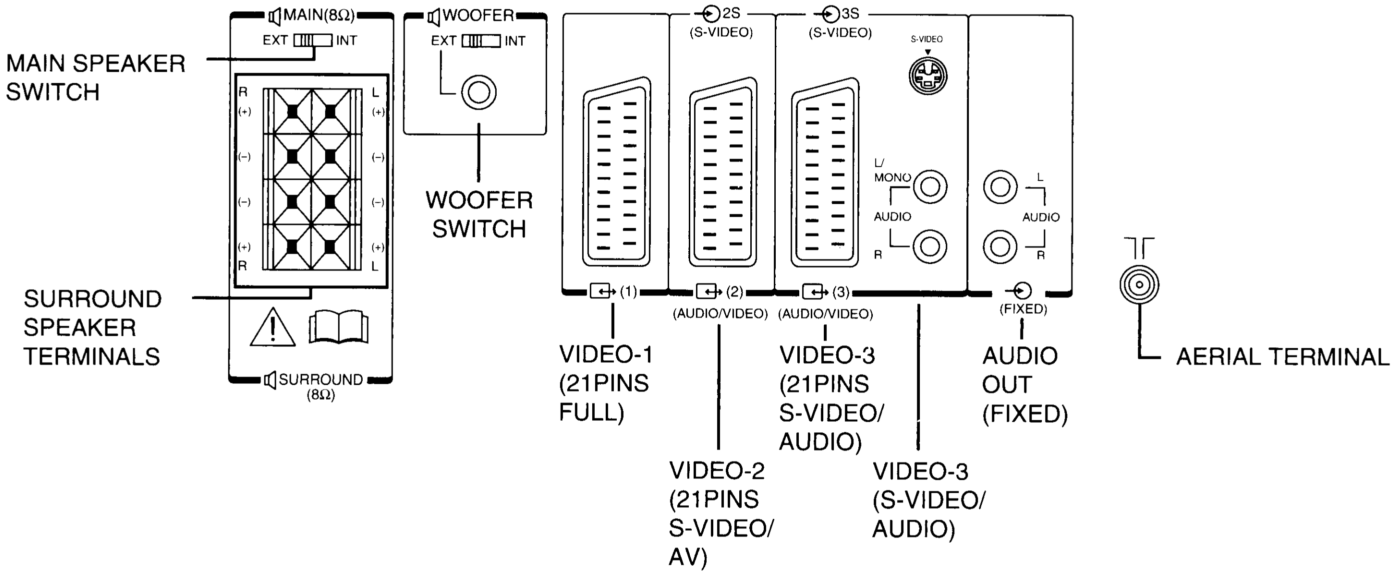
Table-3

LOCATION OF CONTROLS (Representative: 50PJ98G)

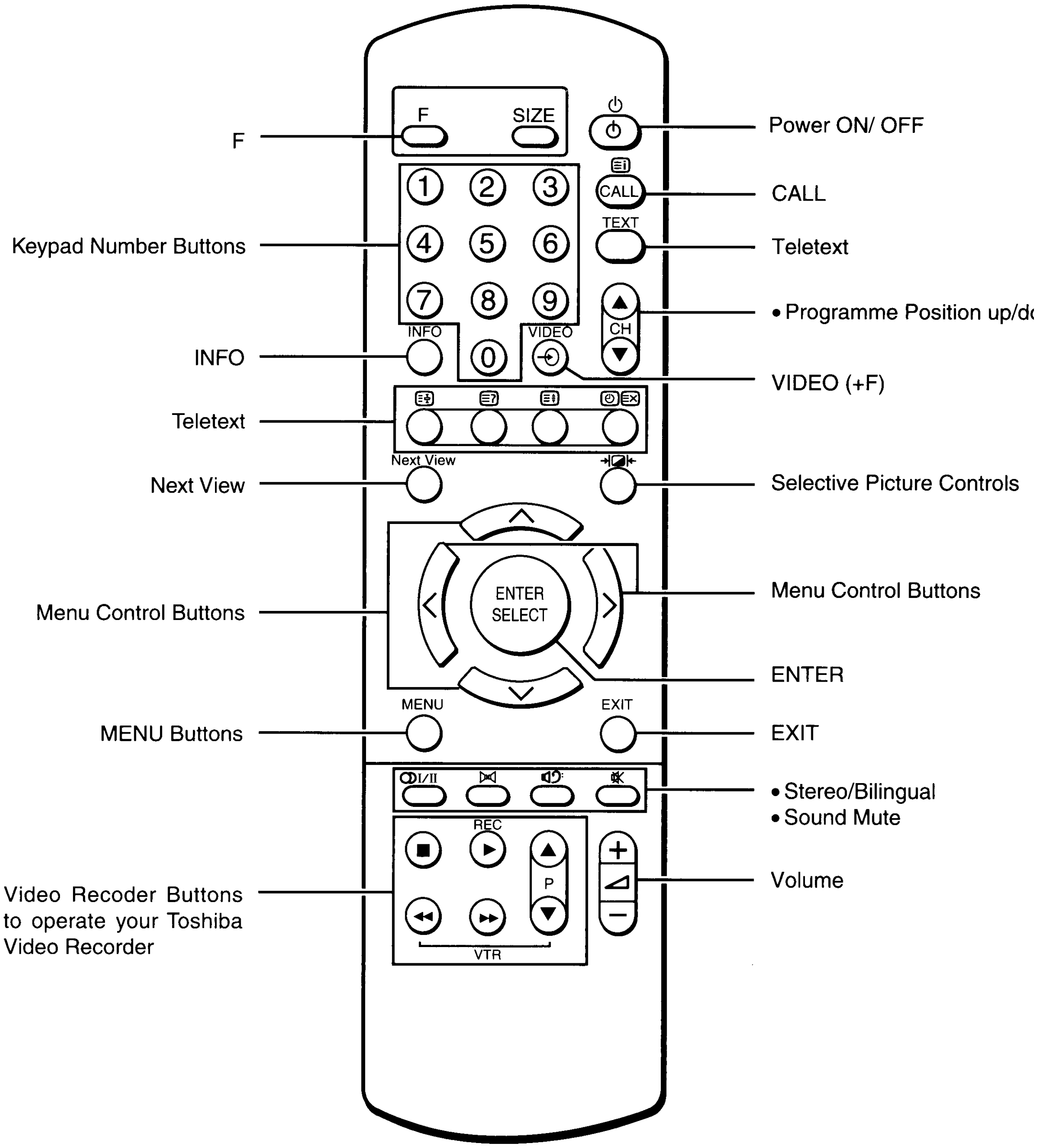
Front


Behind the door
S-VIDEO
VIDEO
AUDIO
L/MONO
R
(3)
MENU
EXIT
− ◺ +
▼ P ▲
Head Phone jack (ø3.5 mm)
(3) Video 3 input terminals (S-VIDEO, VIDEO, AUDIO L/MONO, R)
POWER switch
ON-timer ind
POWER ind
MENU
EXIT
− ◺ + (Volume down/up)
▼P▲ (Channel select)

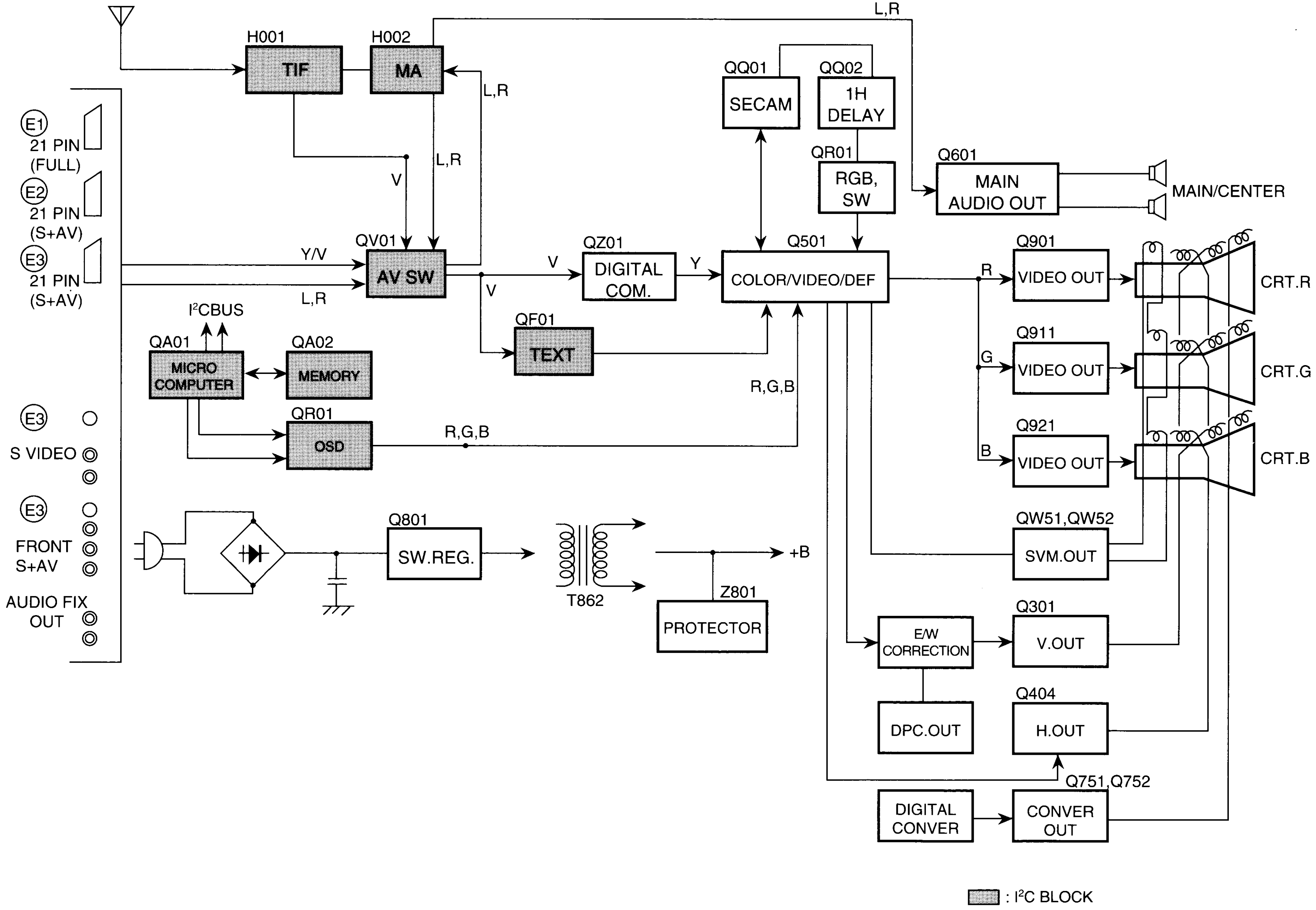
Back


MAIN(8Ω)
EXT
INT
MAIN SPEAKER SWITCH
R
L
(+)
(−)
SURROUND SPEAKER TERMINALS
SURROUND (8Ω)
WOOFER
WOOFER SWITCH
2S (S-VIDEO)
3S (S-VIDEO)
S-VIDEO
L/ MONO
AUDIO
(1)
(2) (AUDIO/VIDEO)
(3) (AUDIO/VIDEO)
(FIXED)
VIDEO-1 (21PINS FULL)
VIDEO-2 (21PINS S-VIDEO/ AV)
VIDEO-3 (21PINS S-VIDEO/ AUDIO)
VIDEO-3 (S-VIDEO/ AUDIO)
AUDIO OUT (FIXED)
AERIAL TERMINAL

Remote Controller (Representative: 50PJ98G)


F
Keypad Number Buttons
INFO
Teletext
Next View
Menu Control Buttons
MENU Buttons
Video Recoder Buttons to operate your Toshiba Video Recorder
Power ON/ OFF
CALL
Teletext
• Programme Position up/d
VIDEO (+F)
Selective Picture Controls
Menu Control Buttons
ENTER
EXIT
• Stereo/Bilingual
• Sound Mute
Volume
F
SIZE
CALL
TEXT
1
2
3
4
5
6
7
8
9
0
INFO
VIDEO
CH
Next View
ENTER
SELECT
MENU
EXIT
I/II
REC
P
VTR

CIRCUIT BLOCK DIAGRAM


H001
TIF
H002
MA
L,R
E1
21 PIN
(FULL)
E2
21 PIN
(S+AV)
E3
21 PIN
(S+AV)
Y/V
L,R
V
QV01
AV SW
I²CBUS
QA01
MICRO COMPUTER
QA02
MEMORY
QR01
OSD
R,G,B
QZ01
DIGITAL COM.
Y
QF01
TEXT
QQ01
SECAM
QQ02
1H DELAY
QR01
RGB, SW
Q501
COLOR/VIDEO/DEF
Q601
MAIN AUDIO OUT
MAIN/CENTER
Q901
VIDEO OUT
Q911
VIDEO OUT
Q921
VIDEO OUT
R
G
B
CRT.R
CRT.G
CRT.B
QW51,QW52
SVM.OUT
Q301
V.OUT
E/W CORRECTION
DPC.OUT
Q404
H.OUT
Q751,Q752
DIGITAL CONVER
CONVER OUT
E3
S VIDEO
E3
FRONT
S+AV
AUDIO FIX
OUT
Q801
SW.REG.
T862
+B
Z801
PROTECTOR
▨ : I²C BLOCK

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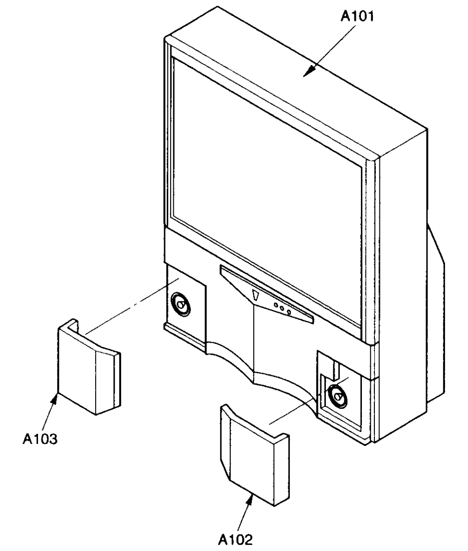
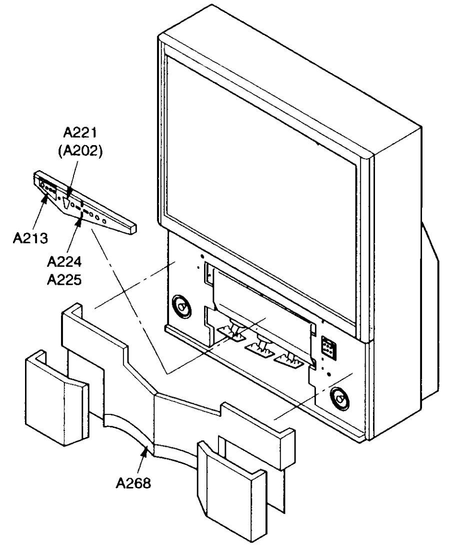
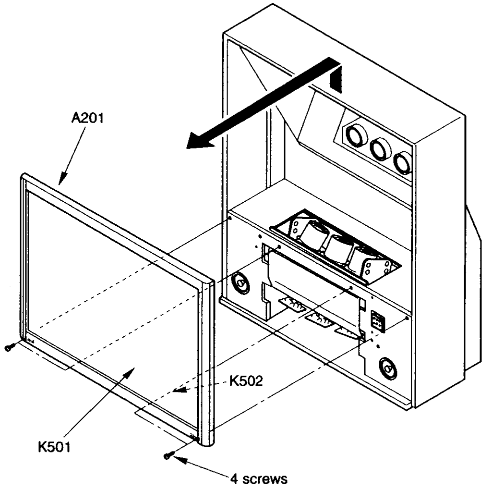
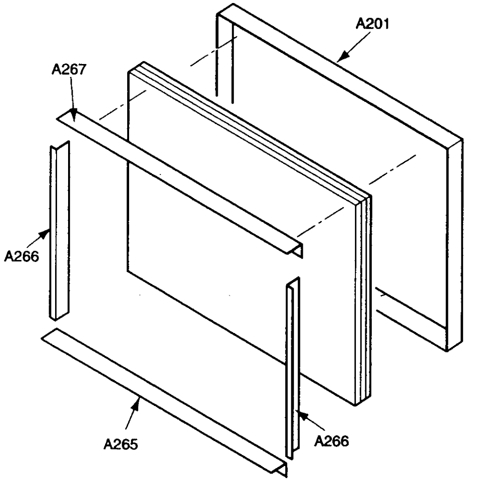
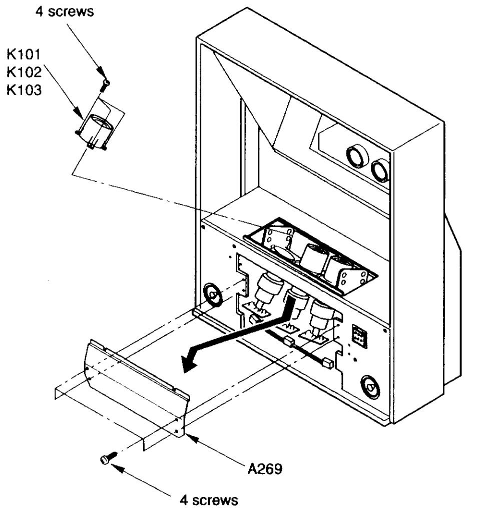
MECHANICAL DISASSEMBLY

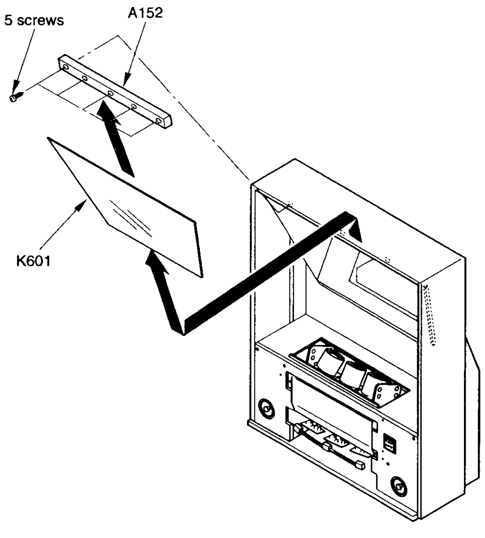

1 Speaker Grille Removal
A101
A103
A102

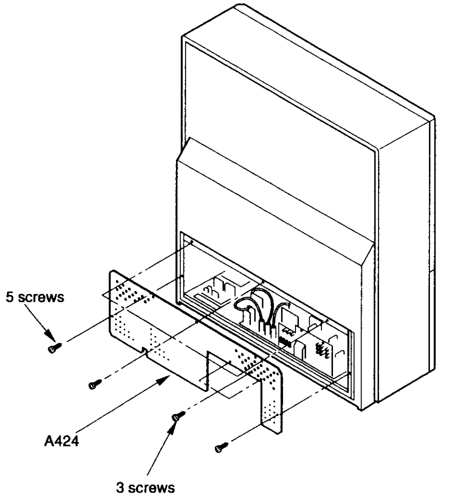

2 Control Panel Removal
A221
(A202)
A213
A224
A225
A268

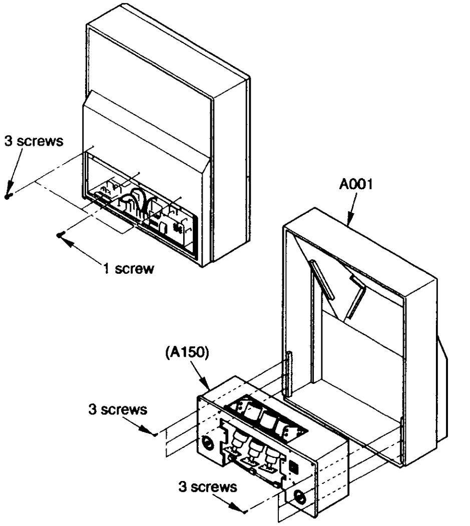

3 Front Mask Removal
A201
K502
K501
4 screws


4 Mask Removal
A201
A267
A266
A265
A266


5 Shield Plate, Lens Removal
4 screws
K101
K102
K103
A269
4 screws


6 Mirror Removal
5 screws
A152
K601

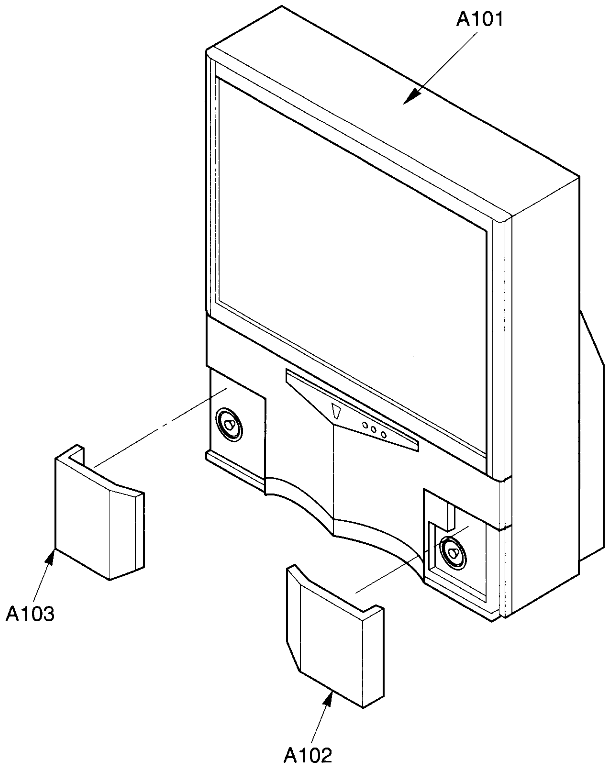

7 Back Board Removal
5 screws
A424
3 screws


8 Light Box Removal
3 screws
A001
1 screw
(A150)
3 screws
3 screws

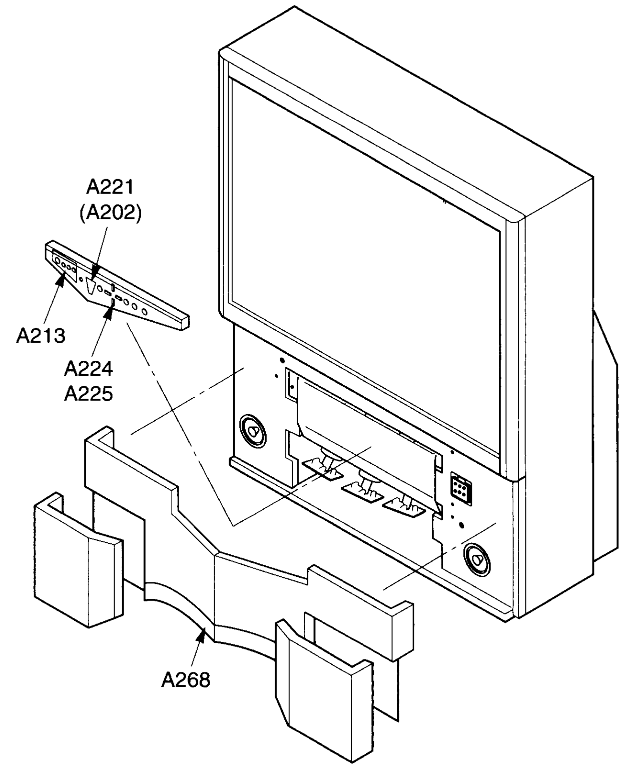
EXVIEW

MECHANICAL DIS

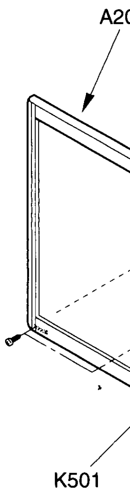
1 Speaker Grille Removal


A101
A103
A102

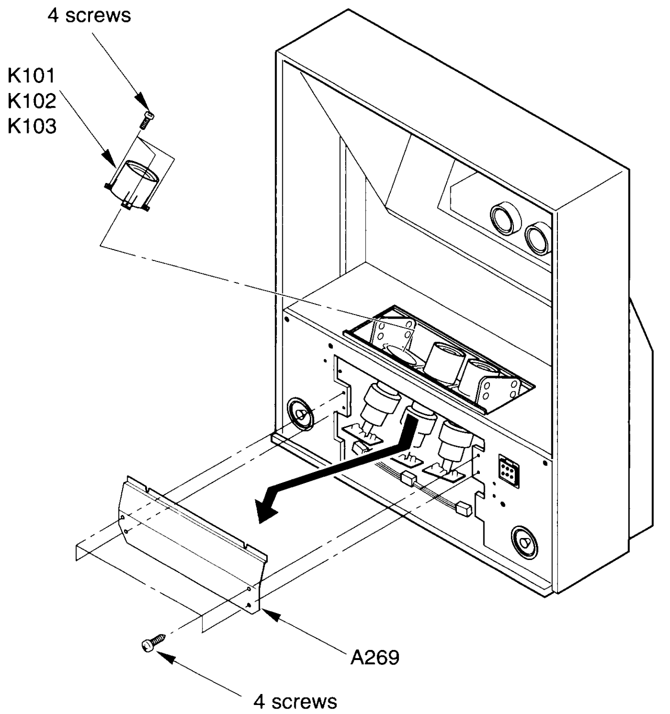
2 Control Panel Removal


A221
(A202)
A213
A224
A225
A268

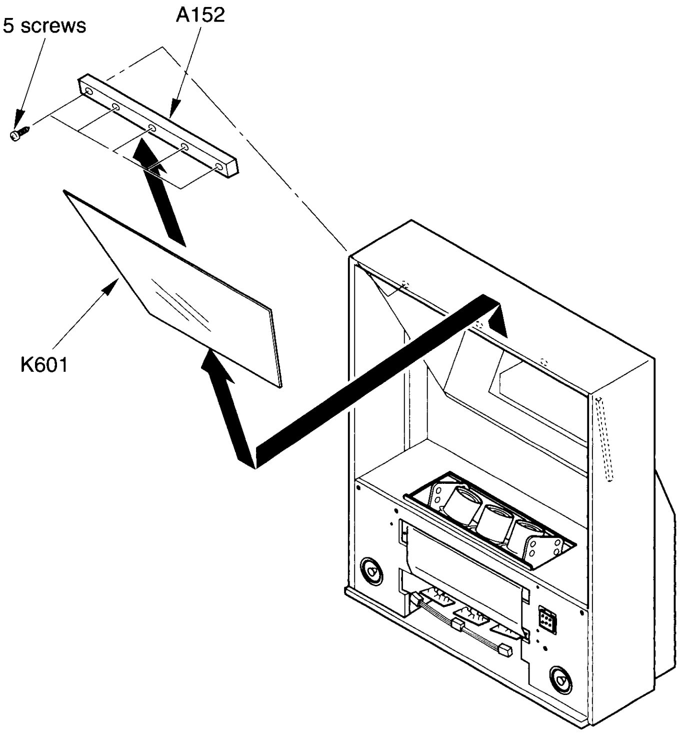
3 Front Ma



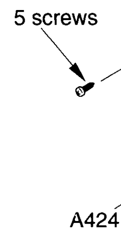
5 Shield Plate, Lens Removal


4 screws
K101
K102
K103
A269
4 screws

6 Mirror Removal


5 screws
A152
K601

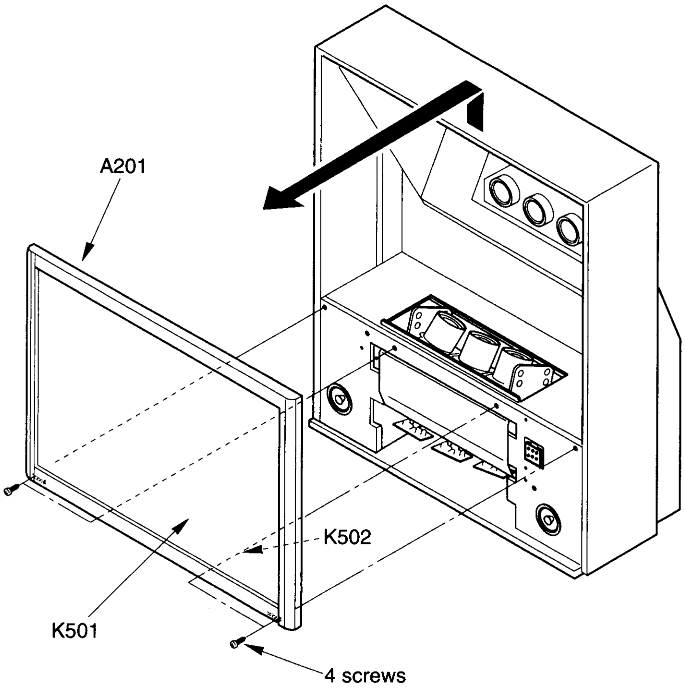
7 Back Bo


5 screws
A424

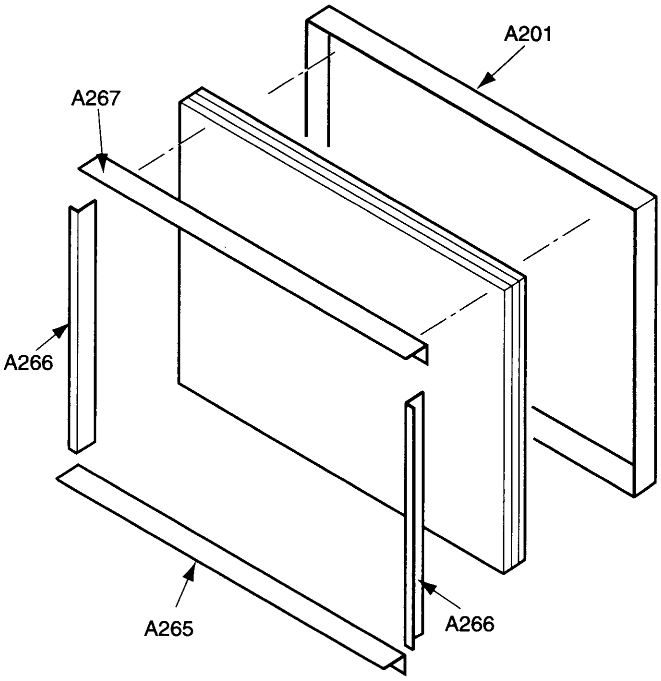
EXVIEW

CAL DISASSEMBLY

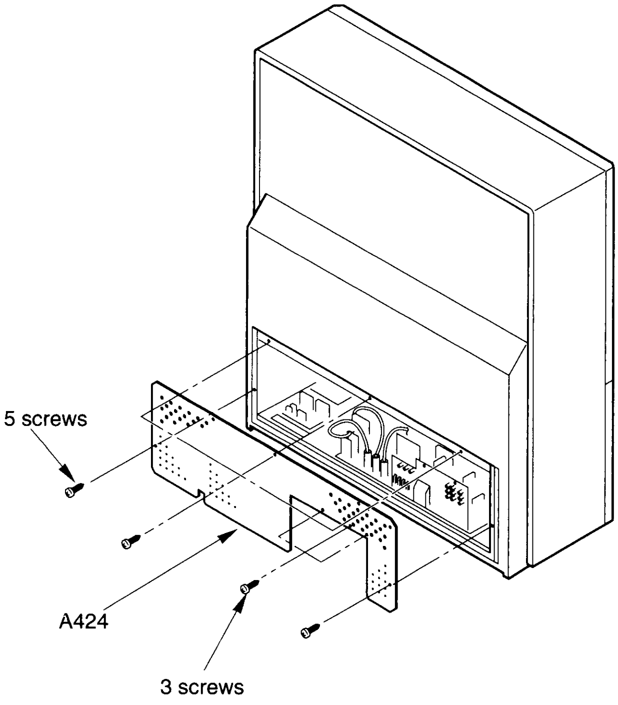
3 Front Mask Removal


A201
K502
K501
4 screws

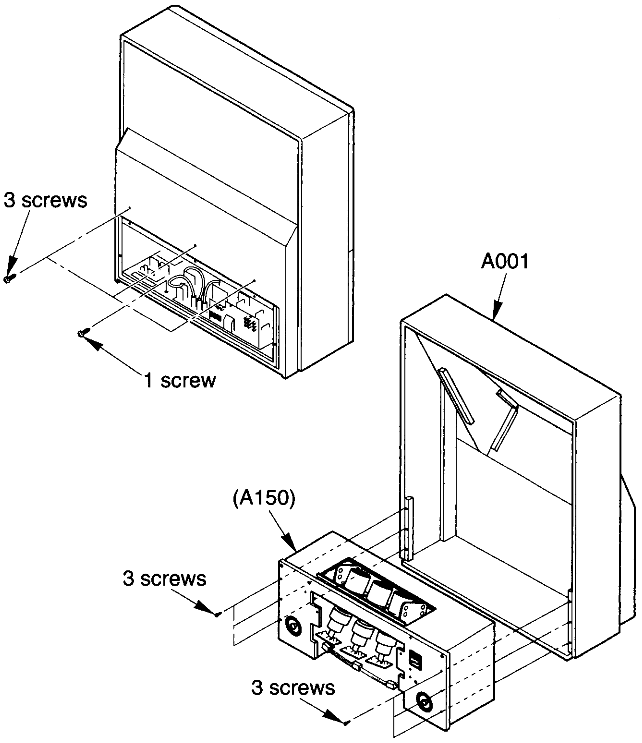
4 Mask Removal


A201
A267
A266
A265
A266

7 Back Board Removal


5 screws
A424
3 screws

8 Light Box Removal


3 screws
A001
1 screw
(A150)
3 screws
3 screws

CHASSIS AND CABINET REPLACEMENT PARTS LIST

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 3 OF THIS MANUAL.

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE . Do not degrade the safety of the receiver through improper servicing.

NOTICE:

- *The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.*
- *The PC board assembly with * mark is no longer available after the end of the production.*

ABBREVIATIONS:

Capacitors .... CD : Ceramic Disk PF : Plastic Film EL : Electrolytic
Resistors .... CF : Carbon Film CC : Carbon Composition MF : Metal Film
OMF : Oxide Metal Film VR : Variable Resistor FR : Fusible Resistor

(All CD and PF capacitors are ±5%, 50V and all resistors, ±5%, 1/6W unless otherwise noted.)

Models : 50PJ98B, 50PJ98G

Location No.	Part No.	Description
CAPACITORS		
C101	24793220	EL, 22μF, ±20%, 10V
C102	24762221	EL, 220μF, ±20%, 10V
C105	24212102	CD, 1000pF, ±10%
C106	24797100	EL, 10μF, ±20%, 50V
C115	24232103	CD, 0.01μF, +80%, -20%
C116	24762221	EL, 220μF, ±20%, 10V
C150	24763102	EL, 1000μF, ±20%, 16V
C183	24766479	EL, 4.7μF, ±20%, 50V
C194	24232103	CD, 0.01μF, +80%, -20%
C201	24538104	PF, 0.1μF
C202	24814103	Chip, 0.01μF, +80%, -20%
C203	24538104	PF, 0.1μF
C204	24669010	EL, 1μF, ±20%, 50V
C205	24669229	EL, 2.2μF, ±20%, 50V
C206	24206220	EL, 22μF, ±20%, 50V
C212	24794100	EL, 10μF, ±20%, 16V
C214	24591334	PF, 0.33μF
C215	24781101	Chip, 100pF, SL
C219	24781100	Chip, 10pF, SL
C220	24781100	Chip, 10pF, SL
C221	24781100	Chip, 10pF, SL
C228	24814103	Chip, 0.01μF, +80%, -20%
C229	24669010	EL, 1μF, ±20%, 50V
C230	24763221	EL, 220μF, ±20%, 16V
C231	24814103	Chip, 0.01μF, +80%, -20%
C232	24669010	EL, 1μF, ±20%, 50V
C260	24085967	EL, 47μF, ±20%, 16V, Non-Polar
C261	24669101	EL, 100μF, ±20%, 50V
C262	24814103	Chip, 0.01μF, +80%, -20%
C264	24781150	Chip, 15pF, SL
C273	24206229	EL, 2.2μF, ±20%, 50V
C281	24763101	EL, 100μF, ±20%, 16V
C282	24232103	CD, 0.01μF, +80%, -20%
C283	24794100	EL, 10μF, ±20%, 16V
C284	24794100	EL, 10μF, ±20%, 16V
C303	24214471	CD, 470pF, ±10%, 500V
C305	24617912	EL, 2.2μF, ±10%, 50V
C306	24617858	EL, 3300μF, ±20%, 35V
C307	24693473	PF, 0.047μF, 100V
C308	24669221	EL, 220μF, ±20%, 50V
C309	24212101	CD, 100pF, ±10%
C310	24669222	EL, 2200μF, ±20%, 50V
C311	24214561	CD, 560pF, ±10%, 500V
C313	24082057	PF, 0.22μF, 100V
C314	24591103	PF, 0.01μF
C315	24591103	PF, 0.01μF
C315	24797478	EL, 0.47μF, ±20%, 50V
C318	24666222	EL, 2200μF, ±20%, 16V
C319	24591102	PF, 1000pF
C320	24669101	EL, 100μF, ±20%, 50V
C321	24591183	PF, 0.018μF
C322	24617912	EL, 2.2μF, ±10%, 50V
C323	24591224	PF, 0.22μF
C326	24591683	PF, 0.068μF
C340	24666100	EL, 10μF, ±20%, 16V
C344	24591102	PF, 1000pF
C350	24591104	PF, 0.1μF
C351	24667222	EL, 2200μF, ±20%, 25V
C352	24669229	EL, 2.2μF, ±20%, 50V
C357	24669100	EL, 10μF, ±20%, 50V
C360	24667100	EL, 10μF, ±20%, 25V
C361	24669100	EL, 10μF, ±20%, 50V
C362	24591104	PF, 0.1μF
C363	24085942	EL, 10μF, ±20%, 16V, Non-Polar
C364	24666100	EL, 10μF, ±20%, 16V
C370	24669101	EL, 100μF, ±20%, 50V
C371	24668100	EL, 10μF, ±20%, 35V
C403	24591223	PF, 0.022μF
C403	24828124	PF, 0.12μF, 200V
C404	24797229	EL, 2.2μF, ±20%, 50V
C413	24214821	CD, 820pF, ±10%, 500V
C415	24815392	Chip, 0.0039μF, ±10%
C416	24678100	EL, 10μF, ±20%, 200V
C417	24214391	CD, 390pF, ±10%, 500V
C418	24095883	PF, 0.015μF, ±3%, 630V
C419	24095803	PF, 0.062μF, 400V
C420	24666101	EL, 100μF, ±20%, 16V
C423	24095779	PF, 0.062μF, 400V
C430	24814103	Chip, 0.01μF, +80%, -20%

Location No.	Part No.	Description
C431	24763102	EL, 1000μF, ±20%, 16V
C440	24082323	PF, 1000pF, ±3%, 1500V
C443	24082348	PF, 6800pF, ±3%, 1500V
C444	24082287	PF, 5100pF, ±3%, 1800V
C445	24828473	PF, 0.047μF, 200V
C445A	23960136	Adhesive, TSE3843-W
C446	24679330	EL, 33μF, ±20%, 250V
C447	24667102	EL, 1000μF, ±20%, 25V
C448	24640908	EL, 33μF, ±20%, 160V
C460	24669331	EL, 330μF, ±20%, 50V
C463	24212152	CD, 1500pF, ±10%
C464	24640872	EL, 10μF, ±20%, 100V
C465	24591332	PF, 3300pF
C466	24567394	PF, 0.39μF
C467	24820153	PF, 0.015μF, 630V
C468	24567474	PF, 0.47μF
C471	24206479	EL, 4.7μF, ±20%, 50V
C475	24820103	PF, 0.01μF, 630V
C477	24092347	CD, 1500pF, ±10%, 2kV
C481	24567104	PF, 0.1μF
C482	24591152	PF, 0.0015μF
C483	24567224	PF, 0.22μF
C485	24669101	EL, 100μF, ±20%, 50V
C493	24591124	PF, 0.12μF
C501	24781101	Chip, 100pF, SL
C502	24814103	Chip, 0.01μF, +80%, -20%
C503	24763221	EL, 220μF, ±20%, 16V
C504	24591222	PF, 2200pF
C505	24774120	Chip, 12pF, CH
C507	24774120	Chip, 12pF, CH
C508	24669010	EL, 1μF, ±20%, 50V
C509	24763101	EL, 100μF, ±20%, 16V
C510	24763101	EL, 100μF, ±20%, 16V
C511	24814103	Chip, 0.01μF, +80%, -20%
C512	24206228	EL, 0.22μF, ±20%, 50V
C513	24814103	Chip, 0.01μF, +80%, -20%
C514	24538104	PF, 0.1μF
C515	24538104	PF, 0.1μF
C516	24781102	Chip, 1000pF, SL
C517	24774010	Chip, 1μF, CH
C519	24774010	Chip, 1μF, CH
C520	24781102	Chip, 1000pF, SL
C521	24781102	Chip, 1000pF, SL
C524	24781122	Chip, 1200pF, SL
C525	24774181	Chip, 180pF, CH
C554	24814103	Chip, 0.01μF, +80%, -20%
C555	24669010	EL, 1μF, ±20%, 50V
C556	24669010	EL, 1μF, ±20%, 50V
C601	24590102	PF, 1000pF
C602	24590102	PF, 1000pF
C603	24669100	EL, 10μF, ±20%, 50V
C604	24669100	EL, 10μF, ±20%, 50V
C605	24667101	EL, 100μF, ±20%, 25V
C606	24667101	EL, 100μF, ±20%, 25V
C607	24538104	PF, 0.1μF
C608	24538104	PF, 0.1μF
C609	24669102	EL, 1000μF, ±20%, 50V
C610	24669102	EL, 1000μF, ±20%, 50V
C611	24667221	EL, 220μF, ±20%, 25V
C613	24666471	EL, 470μF, ±20%, 16V
C621	24669010	EL, 1μF, ±20%, 50V
C623	24667470	EL, 47μF, ±20%, 25V
C624	24669100	EL, 10μF, ±20%, 50V
C625	24669100	EL, 10μF, ±20%, 50V

Location No.	Part No.	Description
C626	24667470	EL, 47μF, ±20%, 25V
C627	24667470	EL, 47μF, ±20%, 25V
C628	24667470	EL, 47μF, ±20%, 25V
C629	24567124	PF, 0.12μF
C630	24567124	PF, 0.12μF
C631	24668102	EL, 1000μF, ±20%, 35V
C632	24668102	EL, 1000μF, ±20%, 35V
C635	24669010	EL, 1μF, ±20%, 50V
C636	24666100	EL, 10μF, ±20%, 16V
C643	24667470	EL, 47μF, ±20%, 25V
C644	24669100	EL, 10μF, ±20%, 50V
C645	24669100	EL, 10μF, ±20%, 50V
C646	24667470	EL, 47μF, ±20%, 25V
C647	24667470	EL, 47μF, ±20%, 25V
C648	24667470	EL, 47μF, ±20%, 25V
C649	24567124	PF, 0.12μF
C650	24567124	PF, 0.12μF
C651	24668102	EL, 1000μF, ±20%, 35V
C652	24668102	EL, 1000μF, ±20%, 35V
C661	24436101	CD, 100pF
C661	24590682	PF, 6800pF
C662	24590272	PF, 2700pF
C663	24669479	EL, 4.7μF, ±20%, 50V
C664	24590273	PF, 0.027μF
C665	24669478	EL, 0.47μF, ±20%, 50V
C666	24669478	EL, 0.47μF, ±20%, 50V
C667	24590102	PF, 1000pF
C668	24669479	EL, 4.7μF, ±20%, 50V
C671	24669100	EL, 10μF, ±20%, 50V
C672	24232103	CD, 0.01μF, +80%, -20%
C673	24781102	Chip, 1000pF, SL
C674	24669100	EL, 10μF, ±20%, 50V
C674	24781102	Chip, 1000pF, SL
C675	24669100	EL, 10μF, ±20%, 50V
C675	24781102	Chip, 1000pF, SL
C676	24669100	EL, 10μF, ±20%, 50V
C676	24781102	Chip, 1000pF, SL
C677	24668221	EL, 220μF, ±20%, 35V
C678	24781102	Chip, 1000pF, SL
C679	24781102	Chip, 1000pF, SL
C680	24669222	EL, 2200μF, ±20%, 50V
C681	24781102	Chip, 1000pF, SL
C682	24669010	EL, 1μF, ±20%, 50V
C682	24781102	Chip, 1000pF, SL
C685	24590102	PF, 1000pF
C690	24666470	EL, 47μF, ±20%, 16V
C691	24212101	CD, 100pF, ±10%
C692	24666100	EL, 10μF, ±20%, 16V
C693	24669479	EL, 4.7μF, ±20%, 50V
C694	24212101	CD, 100pF, ±10%
C695	24666100	EL, 10μF, ±20%, 16V
C696	24762102	EL, 1000μF, ±20%, 10V
C697	24794101	EL, 100μF, ±20%, 16V
C701	24781330	Chip, 33pF, SL
C702	24781330	Chip, 33pF, SL
C711	24206100	EL, 10μF, ±20%, 50V
C714	24092293	Chip, 0.1μF, +80%, -20%, 25V
C715	24092441	Chip, 1μF, +80%, -20%, 16V
C716	24815822	Chip, 0.0082μF, ±10%
C717	24774470	Chip, 47pF, CH
C718	24774470	Chip, 47pF, CH
C719	24794101	EL, 100μF, ±20%, 16V
C720	24092293	Chip, 0.1μF, +80%, -20%, 25V
C721	24538104	PF, 0.1μF

Location No.	Part No.	Description
C722	24092293	Chip, 0.1μF, +80%, -20%, 25V
C724	24092293	Chip, 0.1μF, +80%, -20%, 25V
C725	24092293	Chip, 0.1μF, +80%, -20%, 25V
C726	24092293	Chip, 0.1μF, +80%, -20%, 25V
C727	24092293	Chip, 0.1μF, +80%, -20%, 25V
C728	24763221	EL, 220μF, ±20%, 16V
C729	24092293	Chip, 0.1μF, +80%, -20%, 25V
C730	24538104	PF, 0.1μF
C731	24766010	EL, 1μF, ±20%, 50V
C732	24590822	PF, 8200pF
C735	24092293	Chip, 0.1μF, +80%, -20%, 25V
C736	24794470	EL, 47μF, ±20%, 16V
C739	24092293	Chip, 0.1μF, +80%, -20%, 25V
C740	24092293	Chip, 0.1μF, +80%, -20%, 25V
C741	24794470	EL, 47μF, ±20%, 16V
C742	24794470	EL, 47μF, ±20%, 16V
C743	24092293	Chip, 0.1μF, +80%, -20%, 25V
C744	24092293	Chip, 0.1μF, +80%, -20%, 25V
C745	24794470	EL, 47μF, ±20%, 16V
C746	24794470	EL, 47μF, ±20%, 16V
C747	24092293	Chip, 0.1μF, +80%, -20%, 25V
C748	24092293	Chip, 0.1μF, +80%, -20%, 25V
C749	24794470	EL, 47μF, ±20%, 16V
C750	24794470	EL, 47μF, ±20%, 16V
C756	24781330	Chip, 33pF, SL
C761	24590182	PF, 1800pF
C762	24590562	PF, 5600pF
C763	24774391	Chip, 390pF, CH
C765	24590182	PF, 1800pF
C766	24590562	PF, 5600pF
C767	24774391	Chip, 390pF, CH
C769	24590182	PF, 1800pF
C770	24590562	PF, 5600pF
C771	24774391	Chip, 390pF, CH
C773	24590182	PF, 1800pF
C774	24590562	PF, 5600pF
C775	24774391	Chip, 390pF, CH
C777	24590182	PF, 1800pF
C778	24590562	PF, 5600pF
C779	24774391	Chip, 390pF, CH
C781	24590182	PF, 1800pF
C782	24590562	PF, 5600pF
C783	24774391	Chip, 390pF, ±CH
C795	24761221	EL, 220μF, ±20%, 6.3V
C798	24763101	EL, 100μF, ±20%, 16V
C799	24763101	EL, 100μF, ±20%, 16V
⚠C801	24082374	PF, 0.22μF, ±20%, AC250V
⚠C802	24092557	CD, 2200pF, ±20%, AC250V
⚠C803	24092557	CD, 2200pF, ±20%, AC250V
⚠C804	24092570	CD, 3300pF, ±20%, AC250V
⚠C805	24082374	PF, 0.22μF, ±20%, AC250V
C807	24073058	EL, 2200μF, ±20%, 25V
C808	24617787	EL, 470μF, ±20%, 16V
C809	24567105	PF, 1μF
C810	24086935	EL, 560μF, ±20%, 400V
C811	24676478	EL, 0.47μF, ±20%, 100V
C812	24092281	CD, 4700pF, ±20%, AC250V
C813	24092281	CD, 4700pF, ±20%, AC250V
C814	24678229	EL, 2.2μF, ±20%, 200V
C815	24567474	PF, 0.47μF
C816	24617817	EL, 22μF, ±20%, 50V
C817	24567224	PF, 0.22μF
C819	24214102	CD, 1000pF, ±10%, 500V
C820	24567224	PF, 0.22μF

Location No.	Part No.	Description
C821	24092480	CD, 680pF, ±10%, 2kV
C822	24092481	CD, 820pF, ±10%, 2kV
C823	24092478	CD, 470pF, ±10%, 2kV
C824	24214103	CD, 0.01μF, ±10%, 500V
C825	24591472	PF, 4700pF
C826	24092474	CD, 220pF, ±10%, 2kV
C828	24820683	PF, 0.068μF, 630V
C829	24617820	EL, 100μF, ±20%, 50V
C830	24567105	PF, 1μF
C831	24669220	EL, 22μF, ±20%, 50V
C853	24668102	EL, 1000μF, ±20%, 35V
C855	24214471	CD, 470pF, ±10%, 500V
C856	24214471	CD, 470pF, ±10%, 500V
C857	24214471	CD, 470pF, ±10%, 500V
C858	24214471	CD, 470pF, ±10%, 500V
C859	24214471	CD, 470pF, ±10%, 500V
C860	24669471	EL, 470μF, ±20%, 50V
C861	24668332	EL, 3300μF, ±20%, 35V
C862	24668471	EL, 470μF, ±20%, 35V
C863	24668332	EL, 3300μF, ±20%, 35V
C864	24668471	EL, 470μF, ±20%, 35V
C865	24214471	CD, 470pF, ±10%, 500V
C866	24214471	CD, 470pF, ±10%, 500V
C867	24214471	CD, 470pF, ±10%, 500V
C868	24214471	CD, 470pF, ±10%, 500V
C869	24669222	EL, 2200μF, ±20%, 50V
C870	24214471	CD, 470pF, ±10%, 500V
C871	24214471	CD, 470pF, ±10%, 500V
C872	24214471	CD, 470pF, ±10%, 500V
C873	24214471	CD, 470pF, ±10%, 500V
C874	24212102	CD, 1000pF, ±10%
C875	24667472	EL, 4700μF, ±20%, 25V
C876	24086916	EL, 330μF, ±20%, 160V
C877	24092475	CD, 270pF, ±10%, 2kV
C878	24092475	CD, 270pF, ±10%, 2kV
C879	24092475	CD, 270pF, ±10%, 2kV
C880	24092475	CD, 270pF, ±10%, 2kV
C881	24567474	PF, 0.47μF
C882	24617817	EL, 22μF, ±20%, 50V
C883	24082229	PF, 0.1μF, ±10%, 250V
C884	24617816	EL, 10μF, ±20%, 50V
C885	24617813	EL, 2.2μF, ±20%, 50V
C886	24677470	EL, 47μF, ±20%, 160V
C889	24669010	EL, 1μF, ±20%, 50V
C891	24669010	EL, 1μF, ±20%, 50V
C901	24211102	CD, 1000pF, ±10%, 2kV
C902	24794100	EL, 10μF, ±20%, 16V
C903	24232103	CD, 0.01μF, +80%, -20%
C904	24436561	CD, 560pF
C905	24214102	CD, 1000pF, ±10%, 500V
C911	24211102	CD, 1000pF, ±10%, 2kV
C912	24794100	EL, 10μF, ±20%, 16V
C913	24232103	CD, 0.01μF, +80%, -20%
C914	24436821	CD, 820pF
C915	24679330	EL, 33μF, ±20%, 250V
C915A	23960136	Adhesive, TSE3843-W
C916	24794101	EL, 100μF, ±20%, 16V
C921	24211102	CD, 1000pF, ±10%, 2kV
C922	24794100	EL, 10μF, ±20%, 16V
C924	24232103	CD, 0.01μF, +80%, -20%
C926	24436681	CD, 680pF
C941	24797478	EL, 0.47μF, ±20%, 50V
C943	24667102	EL, 1000μF, ±20%, 25V
C944	24206100	EL, 10μF, ±20%, 50V

Location No.	Part No.	Description
C961	24666101	EL, 100μF, ±20%, 16V
C962	24203100	EL, 10μF, ±20%, 16V
C963	24232103	CD, 0.01μF, +80%, -20%
C964	24591104	PF, 0.1μF
C6101	24232103	CD, 0.01μF, +80%, -20%
C6101	24669010	EL, 1μF, ±20%, 50V
C6102	24232103	CD, 0.01μF, +80%, -20%
C7701	24761221	EL, 220μF, ±20%, 6.3V
C7703	24232103	CD, 0.01μF, +80%, -20%
C7721	24212102	CD, 1000pF, ±10%
C7722	24436101	CD, 100pF
C7724	24667101	EL, 100μF, ±20%, 25V
C7725	24667101	EL, 100μF, ±20%, 25V
C7726	24212102	CD, 1000pF, ±10%
C7727	24436101	CD, 100pF
C7729	24212102	CD, 1000pF, ±10%
C7730	24436101	CD, 100pF
C7732	24212102	CD, 1000pF, ±10%
C7733	24436101	CD, 100pF
C7735	24667101	EL, 100μF, ±20%, 25V
C7736	24669101	EL, 100μF, ±20%, 50V
C7737	24212102	CD, 1000pF, ±10%
C7738	24436101	CD, 100pF
C7740	24212102	CD, 1000pF, ±10%
C7741	24436101	CD, 100pF
C7742	24436330	CD, 33pF
C7743	24436330	CD, 33pF
C7747	24667101	EL, 100μF, ±20%, 25V
C7748	24567104	PF, 0.1μF
C7749	24567104	PF, 0.1μF
C7750	24667101	EL, 100μF, ±20%, 25V
C7751	24667101	EL, 100μF, ±20%, 25V
C7752	24567104	PF, 0.1μF
C7753	24567104	PF, 0.1μF
C7754	24667101	EL, 100μF, ±20%, 25V
C7755	24667101	EL, 100μF, ±20%, 25V
C7756	24567104	PF, 0.1μF
C7757	24567104	PF, 0.1μF
C7758	24667101	EL, 100μF, ±20%, 25V
C7760	24667470	EL, 47μF, ±20%, 25V
C7761	24667470	EL, 47μF, ±20%, 25V
C7762	24669100	EL, 10μF, ±20%, 50V
C7763	24667470	EL, 47μF, ±20%, 25V
C7764	24598331	PF, 330pF
C7767	24667470	EL, 47μF, ±20%, 25V
C7768	24567104	PF, 0.1μF
C7769	24232103	CD, 0.01μF, +80%, -20%
C7770	24669470	EL, 47μF, ±20%, 50V
C7771	24567103	PF, 0.01μF
C7772	24667101	EL, 100μF, ±20%, 25V
C7773	24669101	EL, 100μF, ±20%, 50V
C7774	24436331	CD, 330pF
C7775	24667101	EL, 100μF, ±20%, 25V
C7776	24667470	EL, 47μF, ±20%, 25V
C7777	24669470	EL, 47μF, ±20%, 50V
C7778	24567104	PF, 0.1μF
C7779	24669479	EL, 4.7μF, ±20%, 50V
C8010	24082373	PF, 0.1μF, ±20%, AC250V
C8020	24092553	CD, 470pF, ±20%, AC250V
C8030	24092553	CD, 470pF, ±20%, AC250V
C8040	24092553	CD, 470pF, ±20%, AC250V
C8050	24092281	CD, 4700pF, ±20%, AC250V
C8060	24092281	CD, 4700pF, ±20%, AC250V
C8070	24086072	EL, 100μF, ±20%, 450V

Location No.	Part No.	Description
C8080	24095887	PF, 0.01μF, ±3%, 630V
C8090	24232103	CD, 0.01μF, +80%, -20%
C8100	24617822	EL, 330μF, ±20%, 50V
C8110	24436221	CD, 220pF
C8130	24082373	PF, 0.1μF, ±20%, AC250V
C8140	24591104	PF, 0.1μF
C8160	24214471	CD, 470pF, ±10%, 500V
C8301	24666101	EL, 100μF, ±20%, 16V
C8302	24669100	EL, 10μF, ±20%, 50V
C8303	24669100	EL, 10μF, ±20%, 50V
C8304	24666101	EL, 100μF, ±20%, 16V
C8305	24666470	EL, 47μF, ±20%, 16V
C8306	24666470	EL, 47μF, ±20%, 16V
C8307	24591334	PF, 0.33μF
C8510	24617812	EL, 1μF, ±20%, 50V
C8520	24073076	EL, 6800μF, ±20%, 25V
C8540	24668222	EL, 2200μF, ±20%, 35V
C8560	24092553	CD, 470pF, ±20%, AC250V
C8570	24092553	CD, 470pF, ±20%, AC250V
C8590	24567104	PF, 0.1μF
C8590	24567104	PF, 0.1μF
C9602	24794100	EL, 10μF, ±20%, 16V
CA14	24232103	CD, 0.01μF, +80%, -20%
CA15	24232103	CD, 0.01μF, +80%, -20%
CA19	24436101	CD, 100pF
CA24	24436101	CD, 100pF
CA41	24436101	CD, 100pF
CA42	24436101	CD, 100pF
CA43	24436101	CD, 100pF
CA68	24794100	EL, 10μF, ±20%, 16V
CA69	24232103	CD, 0.01μF, +80%, -20%
CA106	24436101	CD, 100pF
CA107	24538104	PF, 0.1μF
CA108	24538103	PF, 0.01μF
CA109	24538103	PF, 0.01μF
CA420	24794100	EL, 10μF, ±20%, 16V
CA430	24232103	CD, 0.01μF, +80%, -20%
CA440	24232103	CD, 0.01μF, +80%, -20%
CB01	24794470	EL, 47μF, ±20%, 16V
CB90	24232103	CD, 0.01μF, +80%, -20%
CC01	24815102	Chip, 0.001μF, ±10%
CC02	24815102	Chip, 0.001μF, ±10%
CC03	24815102	Chip, 0.001μF, ±10%
CC04	24815102	Chip, 0.001μF, ±10%
CC05	24814103	Chip, 0.01μF, +80%, -20%
CC06	24814103	Chip, 0.01μF, +80%, -20%
CC08	24815102	Chip, 0.001μF, ±10%
CC10	24781820	Chip, 82pF, SL
CC12	24814103	Chip, 0.01μF, +80%, -20%
CC13	24814103	Chip, 0.01μF, +80%, -20%
CC15	24212102	CD, 1000pF, ±10%
CC23	24814103	Chip, 0.01μF, +80%, -20%
CC29	24232103	CD, 0.01μF, +80%, -20%
CC30	24591474	PF, 0.47μF
CC30	24814103	Chip, 0.01μF, +80%, -20%
CC32	24232103	CD, 0.01μF, +80%, -20%
CC32	24814103	Chip, 0.01μF, +80%, -20%
CC34	24232103	CD, 0.01μF, +80%, -20%
CC35	24232103	CD, 0.01μF, +80%, -20%
CC36	24212102	CD, 1000pF, ±10%
CC37	24232103	CD, 0.01μF, +80%, -20%
CC38	24212102	CD, 1000pF, ±10%
CC39	24232103	CD, 0.01μF, +80%, -20%
CC40	24781470	Chip, 47pF, SL

Location No.	Part No.	Description
CC41	24781470	Chip, 47pF, SL
CC42	24781470	Chip, 47pF, SL
CC45	24436050	CD, 8pF
CC46	24436050	CD, 8pF
CC47	24232103	CD, 0.01μF, +80%, -20%
CD88	24794100	EL, 10μF, ±20%, 16V
CD89	24567104	PF, 0.1μF
CF03	24567104	PF, 0.1μF
CF04	24766101	EL, 100μF, ±20%, 50V
CF05	24766101	EL, 100μF, ±20%, 50V
CF06	24774220	Chip, 22pF, CH
CF07	24774220	Chip, 22pF, CH
CF08	24567104	PF, 0.1μF
CF09	24567104	PF, 0.1μF
CF10	24206100	EL, 10μF, ±20%, 50V
CF11	24567104	PF, 0.1μF
CF12	24814103	Chip, 0.01μF, +80%, -20%
CF14	24814103	Chip, 0.01μF, +80%, -20%
CF16	24567224	PF, 0.22μF
CF17	24794101	EL, 100μF, ±20%, 16V
CF18	24794101	EL, 100μF, ±20%, 16V
CF19	24814103	Chip, 0.01μF, +80%, -20%
CF20	24766010	EL, 1μF, ±20%, 50V
CQ01	24781102	Chip, 1000pF, SL
CQ02	24781820	Chip, 82pF, SL
CQ03	24781102	Chip, 1000pF, SL
CQ04	24203100	EL, 10μF, ±20%, 16V
CQ05	24591563	PF, 0.056μF
CQ07	24591203	PF, 0.02μF
CQ08	24567683	PF, 0.068μF
CQ09	24206229	EL, 2.2μF, ±20%, 50V
CQ10	24591223	PF, 0.022μF
CQ11	24206229	EL, 2.2μF, ±20%, 50V
CQ12	24781820	Chip, 82pF, SL
CQ13	24669010	EL, 1μF, ±20%, 50V
CQ14	24669010	EL, 1μF, ±20%, 50V
CQ15	24763101	EL, 100μF, ±20%, 16V
CQ16	24814103	Chip, 0.01μF, +80%, -20%
CQ17	24774150	Chip, 15pF, CH
CQ18	24781820	Chip, 82pF, SL
CQ19	24590103	PF, 0.01μF
CQ20	24567104	PF, 0.1μF
CQ21	24794470	EL, 47μF, ±20%, 16V
CQ22	24814103	Chip, 0.01μF, +80%, -20%
CQ23	24567104	PF, 0.1μF
CQ24	24567104	PF, 0.1μF
CQ25	24797100	EL, 10μF, ±20%, 50V
CQ26	24567104	PF, 0.1μF
CQ27	24567104	PF, 0.1μF
CQ28	24797478	EL, 0.47μF, ±20%, 50V
CQ29	24794101	EL, 100μF, ±20%, 16V
CQ30	24814103	Chip, 0.01μF, +80%, -20%
CQ31	24797478	EL, 0.47μF, ±20%, 50V
CQ32	24590103	PF, 0.01μF
CQ33	24567104	PF, 0.1μF
CQ34	24567104	PF, 0.1μF
CQ35	24206478	EL, 0.47μF, ±20%, 50V
CQ36	24206478	EL, 0.47μF, ±20%, 50V
CQ37	24669010	EL, 1μF, ±20%, 50V
CQ38	24669010	EL, 1μF, ±20%, 50V
CQ39	24669010	EL, 1μF, ±20%, 50V
CQ40	24781820	Chip, 82pF, SL
CQ41	24781090	Chip, 9pF, ±0.5pF, SL
CQ42	24781090	Chip, 9pF, ±0.5pF, SL

Location No.	Part No.	Description
CQ43	24781090	Chip, 9pF, ±0.5pF, SL
CQ45	24781102	Chip, 1000pF, SL
CQ46	24781102	Chip, 1000pF, SL
CQ61	24781102	Chip, 1000pF, SL
CQ62	24781470	Chip, 47pF, SL
CQ63	24781470	Chip, 47pF, SL
CR01	24206010	EL, 1μF, ±20%, 50V
CR01	24567104	PF, 0.1μF
CR02	24232103	CD, 0.01μF, +80%, -20%
CR02	24567104	PF, 0.1μF
CR03	24436101	CD, 100pF
CR03	24567104	PF, 0.1μF
CR04	24567104	PF, 0.1μF
CR05	24567104	PF, 0.1μF
CR06	24567104	PF, 0.1μF
CR07	24814103	Chip, 0.01μF, +80%, -20%
CR08	24794100	EL, 10μF, ±20%, 16V
CR09	24538104	PF, 0.1μF
CR09	24814103	Chip, 0.01μF, +80%, -20%
CR10	24794470	EL, 47μF, ±20%, 16V
CR11	24538104	PF, 0.1μF
CR12	24567104	PF, 0.1μF
CR13	24567104	PF, 0.1μF
CR14	24567104	PF, 0.1μF
CR18	24538104	PF, 0.1μF
CR19	24538104	PF, 0.1μF
CR20	24538104	PF, 0.1μF
CS01	24085944	EL, 2.2μF, ±20%, 50V, Non-Polar
CS02	24085944	EL, 2.2μF, ±20%, 50V, Non-Polar
CS03	24206229	EL, 2.2μF, ±20%, 50V
CS04	24206229	EL, 2.2μF, ±20%, 50V
CS05	24206229	EL, 2.2μF, ±20%, 50V
CS06	24206229	EL, 2.2μF, ±20%, 50V
CS07	24206229	EL, 2.2μF, ±20%, 50V
CS08	24206229	EL, 2.2μF, ±20%, 50V
CS12	24781102	Chip, 1000pF, SL
CS13	24781102	Chip, 1000pF, SL
CS14	24206100	EL, 10μF, ±20%, 50V
CS15	24206100	EL, 10μF, ±20%, 50V
CS17	24203100	EL, 10μF, ±20%, 16V
CS18	24203100	EL, 10μF, ±20%, 16V
CS19	24206478	EL, 0.47μF, ±20%, 50V
CS22	24203100	EL, 10μF, ±20%, 16V
CS23	24203100	EL, 10μF, ±20%, 16V
CS53	24781102	Chip, 1000pF, SL
CV01	24567103	PF, 0.01μF
CV02	24085970	EL, 10μF, ±20%, 16V, Non-Polar
CV03	24203100	EL, 10μF, ±20%, 16V
CV04	24203100	EL, 10μF, ±20%, 16V
CV05	24814103	Chip, 0.01μF, +80%, -20%
CV06	24203100	EL, 10μF, ±20%, 16V
CV08	24763102	EL, 1000μF, ±20%, 16V
CV10	24085970	EL, 10μF, ±20%, 16V, Non-Polar
CV11	24781331	Chip, 330pF, SL
CV12	24092178	CD, 0.1μF, ±10%, 25V
CV13	24814103	Chip, 0.01μF, +80%, -20%
CV14	24781102	Chip, 1000pF, SL
CV15	24781102	Chip, 1000pF, SL
CV16	24781102	Chip, 1000pF, SL
CV17	24781102	Chip, 1000pF, SL

Location No.	Part No.	Description
CV18	24781102	Chip, 1000pF, SL
CV19	24781102	Chip, 1000pF, SL
CV20	24781430	Chip, 43pF, SL
CV23	24203101	EL, 100μF, ±20%, 16V
CV24	24814103	Chip, 0.01μF, +80%, -20%
CV25	24763471	EL, 470μF, ±20%, 16V
CV31	24781102	Chip, 1000pF, SL
CV34	24781102	Chip, 1000pF, SL
CV35	24814103	Chip, 0.01μF, +80%, -20%
CV37	24781102	Chip, 1000pF, SL
CV39	24203101	EL, 100μF, ±20%, 16V
CV40	24814103	Chip, 0.01μF, +80%, -20%
CV46	24212332	CD, 3300pF, ±10%
CV47	24212332	CD, 3300pF, ±10%
CV48	24212102	CD, 1000pF, ±10%
CV65	24203101	EL, 100μF, ±20%, 16V
CV66	24203101	EL, 100μF, ±20%, 16V
CV67	24763471	EL, 470μF, ±20%, 16V
CV68	24763471	EL, 470μF, ±20%, 16V
CV78	24781330	Chip, 33pF, SL
CW04	24591822	PF, 8200pF
CW05	24212103	CD, 0.01μF, ±10%
CW07	24666470	EL, 47μF, ±20%, 16V
CW12	24666470	EL, 47μF, ±20%, 16V
CW13	24790100	EL, 10μF, ±20%, 160V
CW14	24436101	CD, 100pF
CW15	24214472	CD, 4700pF, ±10%, 500V
CW16	24436101	CD, 100pF
CW17	24214472	CD, 4700pF, ±10%, 500V
CW18	24666470	EL, 47μF, ±20%, 16V
CW19	24435560	CD, 56pF, 500V
CW20	24790100	EL, 10μF, ±20%, 160V
CW21	24794470	EL, 47μF, ±20%, 16V
CW22	24212561	CD, 560pF, ±10%
CW26	24212102	CD, 1000pF, ±10%
CZ03	24092442	Chip, 0.47μF, +80%, -20%
CZ05	24814103	Chip, 0.01μF, +80%, -20%
CZ07	24092178	CD, 0.1μF, ±10%, 25V
CZ09	24781220	Chip, 22pF, SL
CZ10	24781100	Chip, 10pF, SL
CZ11	24781220	Chip, 22pF, SL
CZ12	24814103	Chip, 0.01μF, +80%, -20%
CZ13	24814103	Chip, 0.01μF, +80%, -20%
CZ14	24203100	EL, 10μF, ±20%, 16V
CZ17	24814103	Chip, 0.01μF, +80%, -20%
CZ19	24781181	Chip, 180pF, SL
CZ20	24815103	Chip, 0.01μF, ±10%
CZ21	24781122	Chip, 1200pF, SL
CZ22	24203100	EL, 10μF, ±20%, 16V
CZ23	24814103	Chip, 0.01μF, +80%, -20%
CZ24	24814103	Chip, 0.01μF, +80%, -20%
CZ25	24203100	EL, 10μF, ±20%, 16V
CZ26	24814103	Chip, 0.01μF, +80%, -20%
CZ28	24814103	Chip, 0.01μF, +80%, -20%
CZ29	24814103	Chip, 0.01μF, +80%, -20%
CZ30	24203100	EL, 10μF, ±20%, 16V
CZ31	24092178	CD, 0.1μF, ±10%, 25V
CZ32	24781470	Chip, 47pF, SL
CZ33	24781470	Chip, 47pF, SL
CZ34	24781470	Chip, 47pF, SL
CZ35	24781470	Chip, 47pF, SL
CZ45	24781100	Chip, 10pF, SL

Location No.	Part No.	Description
RESISTORS		
R101	24382223	OMF, 22k ohm, 1W
R201	24872101	Chip, 100 ohm, 1/16W
R204	24872104	Chip, 100k ohm, 1/16W
R205	24872101	Chip, 100 ohm, 1/16W
R206	24872471	Chip, 470 ohm, 1/16W
R207	24872103	Chip, 10k ohm, 1/16W
R208	24872103	Chip, 10k ohm, 1/16W
R209	24872103	Chip, 10k ohm, 1/16W
R210	24872101	Chip, 100 ohm, 1/16W
R211	24872101	Chip, 100 ohm, 1/16W
R212	24872101	Chip, 100 ohm, 1/16W
R213	24872681	Chip, 680 ohm, 1/16W
R214	24872681	Chip, 680 ohm, 1/16W
R215	24872681	Chip, 680 ohm, 1/16W
R216	24872103	Chip, 10k ohm, 1/16W
R218	24872101	Chip, 100 ohm, 1/16W
R219	24872101	Chip, 100 ohm, 1/16W
R220	24872101	Chip, 100 ohm, 1/16W
R222	24872333	Chip, 33k ohm, 1/16W
R223	24872332	Chip, 3300 ohm, 1/16W
R229	24872223	Chip, 22k ohm, 1/16W
R231	24872222	Chip, 2200 ohm, 1/16W
R235	24872222	Chip, 2200 ohm, 1/16W
R260	24872153	Chip, 15k ohm, 1/16W
R261	24872682	Chip, 6800 ohm, 1/16W
R266	24872102	Chip, 1k ohm, 1/16W
R267	24872182	Chip, 1800 ohm, 1/16W
R268	24872101	Chip, 100 ohm, 1/16W
R269	24872821	Chip, 820 ohm, 1/16W
R273	24872473	Chip, 47k ohm, 1/16W
R274	24872102	Chip, 1k ohm, 1/16W
R275	24872101	Chip, 100 ohm, 1/16W
R276	24872683	Chip, 68k ohm, 1/16W
R277	24872103	Chip, 10k ohm, 1/16W
R281	24366821	CF, 820 ohm
R282	24366102	CF, 1k ohm
R283	24366472	CF, 4700 ohm
R291	24366123	CF, 12k ohm
R292	24366103	CF, 10k ohm
R293	24366133	CF, 13k ohm
R297	24366102	CF, 1k ohm
R298	24367912	CF, 9100 ohm, ±2%
R299	24367103	CF, 10k ohm, ±2%
R301	24366102	CF, 1k ohm
R303	24321129	MF, 1.2 ohm, 1/2W
R304	24366223	CF, 22k ohm
R305	24322828	MF, 0.82 ohm, 1W
R306	24366563	CF, 56k ohm
R307	24366224	CF, 220k ohm
R308	24382391	OMF, 390 ohm, 1W
R313	24366104	CF, 100k ohm
R313	24366153	CF, 15k ohm
R314	24366105	CF, 1M ohm
R315	24366824	CF, 820k ohm
R316	24366274	CF, 270k ohm
R318	24366471	CF, 470 ohm
R319	24366471	CF, 470 ohm
R320	24366101	CF, 100 ohm
R321	24872682	Chip, 6800 ohm, 1/16W
R327	24000187	FR, 3.3 ohm, 1W
R329	24366153	CF, 15k ohm
R330	24366102	CF, 1k ohm
R334	24366102	CF, 1k ohm

Location No.	Part No.	Description
R336	24383271	OMF, 270 ohm, 2W
R341	24366472	CF, 4700 ohm
R343	24366153	CF, 15k ohm
R346	24366102	CF, 1k ohm
R347	24366184	CF, 180k ohm
R350	24366222	CF, 2200 ohm
R351	24366823	CF, 82k ohm
R352	24366104	CF, 100k ohm
R352	24366222	CF, 2200 ohm
R353	24366682	CF, 6800 ohm
R353	24552101	OMF, 100 ohm, 1/2W
R354	24366222	CF, 2200 ohm
R356	24366562	CF, 5600 ohm
R356	24366823	CF, 82k ohm
R357	24366152	CF, 1500 ohm
R357	24382114	OMF, 110k ohm, 1W
R358	24366682	CF, 6800 ohm
R359	24366103	CF, 10k ohm
R360	24366102	CF, 1k ohm
R361	24366113	CF, 11k ohm
R362	24366754	CF, 750k ohm
R363	24366103	CF, 10k ohm
R364	24366103	CF, 10k ohm
R365	24366103	CF, 10k ohm
R366	24366103	CF, 10k ohm
R367	24366752	CF, 7500 ohm
R368	24366183	CF, 18k ohm
R369	24366102	CF, 1k ohm
R370	24321159	MF, 1.5 ohm, 1/2W
R371	24366682	CF, 6800 ohm
R372	24366472	CF, 4700 ohm
R373	24366152	CF, 1500 ohm
R374	24366473	CF, 47k ohm
R375	24366102	CF, 1k ohm
R385	24366102	CF, 1k ohm
R386	24366472	CF, 4700 ohm
R387	24366103	CF, 10k ohm
R389	24366222	CF, 2200 ohm
R390	24366682	CF, 6800 ohm
R390	24382561	OMF, 560 ohm, 1W
R391	24366153	CF, 15k ohm
R391	24382561	OMF, 560 ohm, 1W
R392	24366822	CF, 8200 ohm
R392	24382561	OMF, 560 ohm, 1W
R400	24942102	CC, 1k ohm, 1/2W
R401	24872391	Chip, 390 ohm, 1/16W
R402	24872103	Chip, 10k ohm, 1/16W
R403	24872302	Chip, 3k ohm, 1/16W
R404	24383270	OMF, 27 ohm, 2W
R405	24382562	OMF, 5600 ohm, 1W
R407	24872103	Chip, 10k ohm, 1/16W
R408	24321209	MF, 2 ohm, 1/2W
R409	24381103	OMF, 10k ohm, 1/2W
R410	24366331	CF, 330 ohm
R411	24366471	CF, 470 ohm
R415	24553272	OMF, 2700 ohm, 1W
R416	24510562	Cement, 5600 ohm, 5W
R421	24872274	Chip, 270k ohm, 1/16W
R422	24872152	Chip, 1500 ohm, 1/16W
R423	24872152	Chip, 1500 ohm, 1/16W
R424	24546338	FR, 0.33 ohm, 1/2W
R425	24552331	OMF, 330 ohm, 1/2W
R425	24872153	Chip, 15k ohm, 1/16W
R426	24366821	CF, 820 ohm

Location No.	Part No.	Description
R427	24366432	CF, 4300 ohm
R428	24366561	CF, 560 ohm
R429	24552330	OMF, 33 ohm, 1/2W
R431	24382100	OMF, 10 ohm, 1W
R432	24532560	FR, 56 ohm, 1W
R434	24366102	CF, 1k ohm
R435	24366333	CF, 33k ohm
R436	24327224	MF, 220k ohm, ±1%, 1/4W
R439	24366472	CF, 4700 ohm
R441	24383102	OMF, 1k ohm, 2W
R443	24310109	MF, 1.0 ohm, 1/2W
R444	24338398	MF, 0.39 ohm, 1W
R445	24382682	OMF, 6800 ohm, 1W
R446	24382682	OMF, 6800 ohm, 1W
R447	24382473	OMF, 47k ohm, 1W
R448	24338828	MF, 0.82 ohm, 1W
R450	24066879	VR, 1k ohm, 0.3W
R451	24376223	CF, 22k ohm, 1/2W
R452	24376223	CF, 22k ohm, 1/2W
R453	24376223	CF, 22k ohm, 1/2W
R454	24366223	CF, 22k ohm
R455	24367333	CF, 33k ohm, ±2%
R460	24552332	OMF, 3300 ohm, 1/2W
R461	24366332	CF, 3300 ohm
R462	24366102	CF, 1k ohm
R463	24339109	MF, 1 ohm, 2W
R464	24366273	CF, 27k ohm
R465	24366114	CF, 110k ohm
R466	24366152	CF, 1500 ohm
R469	24000465	FR, 9.1 ohm, 1W
R472	24552270	OMF, 27 ohm, 1/2W
R477	24383121	OMF, 120 ohm, 2W
R478	24376333	CF, 33k ohm, 1/2W
R480	24553272	OMF, 2700 ohm, 1W
R481	24366473	CF, 47k ohm
R482	24366103	CF, 10k ohm
R483	24366154	CF, 150k ohm
R484	24366473	CF, 47k ohm
R485	24552221	OMF, 220 ohm, 1/2W
R487	24366472	CF, 4700 ohm
R488	24366474	CF, 470k ohm
R489	24366332	CF, 3300 ohm
R490	24366332	CF, 3300 ohm
R491	24366912	CF, 9100 ohm
R492	24366102	CF, 1k ohm
R493	24552472	OMF, 4700 ohm, 1/2W
R494	24366183	CF, 18k ohm
R496	24382114	OMF, 110k ohm, 1W
R497	24552201	OMF, 200 ohm, 1/2W
R501	24872223	Chip, 22k ohm, 1/16W
R502	24872101	Chip, 100 ohm, 1/16W
R503	24872101	Chip, 100 ohm, 1/16W
R505	24872102	Chip, 1k ohm, 1/16W
R506	24872103	Chip, 10k ohm, 1/16W
R508	24872102	Chip, 1k ohm, 1/16W
R509	24872102	Chip, 1k ohm, 1/16W
R510	24872472	Chip, 4700 ohm, 1/16W
R511	24872101	Chip, 100 ohm, 1/16W
R516	24872101	Chip, 100 ohm, 1/16W
R517	24872101	Chip, 100 ohm, 1/16W
R518	24872472	Chip, 4700 ohm, 1/16W
R519	24872101	Chip, 100 ohm, 1/16W
R520	24872103	Chip, 10k ohm, 1/16W
R521	24872223	Chip, 22k ohm, 1/16W

Location No.	Part No.	Description
R522	24872473	Chip, 47k ohm, 1/16W
R532	24000824	Chip, Jumper, 2125 type
R533	24000824	Chip, Jumper, 2125 type
R534	24000824	Chip, Jumper, 2125 type
R601	24366562	CF, 5600 ohm
R602	24366562	CF, 5600 ohm
R603	24366122	CF, 1200 ohm
R604	24366122	CF, 1200 ohm
R605	24366229	CF, 2.2 ohm
R606	24366229	CF, 2.2 ohm
R607	24366392	CF, 3900 ohm
R608	24366392	CF, 3900 ohm
R610	24366104	CF, 100k ohm
R611	24366104	CF, 100k ohm
R612	24366103	CF, 10k ohm
R613	24366224	CF, 220k ohm
R614	24366104	CF, 100k ohm
R623	24366229	CF, 2.2 ohm
R624	24366229	CF, 2.2 ohm
R631	24366562	CF, 5600 ohm
R632	24366473	CF, 47k ohm
R633	24366223	CF, 22k ohm
R634	24366562	CF, 5600 ohm
R635	24366224	CF, 220k ohm
R636	24366104	CF, 100k ohm
R643	24366229	CF, 2.2 ohm
R644	24366229	CF, 2.2 ohm
R661	24366103	CF, 10k ohm
R661	24366273	CF, 27k ohm
R662	24366682	CF, 6800 ohm
R663	24366104	CF, 100k ohm
R664	24366183	CF, 18k ohm
R665	24366102	CF, 1k ohm
R666	24366473	CF, 47k ohm
R670	24552182	OMF, 1800 ohm, 1/2W
R671	24366102	CF, 1k ohm
R671	24366153	CF, 15k ohm
R672	24366102	CF, 1k ohm
R672	24366153	CF, 15k ohm
R673	24366102	CF, 1k ohm
R673	24366563	CF, 56k ohm
R674	24366563	CF, 56k ohm
R675	24366102	CF, 1k ohm
R675	24366103	CF, 10k ohm
R676	24872223	Chip, 22k ohm, 1/16W
R677	24366104	CF, 100k ohm
R677	24872223	Chip, 22k ohm, 1/16W
R678	24366103	CF, 10k ohm
R678	24872223	Chip, 22k ohm, 1/16W
R679	24366103	CF, 10k ohm
R679	24872223	Chip, 22k ohm, 1/16W
R680	24872223	Chip, 22k ohm, 1/16W
R681	24366223	CF, 22k ohm
R681	24872223	Chip, 22k ohm, 1/16W
R682	24366102	CF, 1k ohm
R682	24366473	CF, 47k ohm
R683	24366102	CF, 1k ohm
R683	24366223	CF, 22k ohm
R684	24366223	CF, 22k ohm
R685	24366223	CF, 22k ohm
R686	24366223	CF, 22k ohm
R688	24366222	CF, 2200 ohm
R688	24552391	OMF, 390 ohm, 1/2W
R689	24366682	CF, 6800 ohm

Location No.	Part No.	Description
R690	24552391	OMF, 390 ohm, 1/2W
R690	24872681	Chip, 680 ohm, 1/16W
R691	24366822	CF, 8200 ohm
R691	24872681	Chip, 680 ohm, 1/16W
R692	24366562	CF, 5600 ohm
R692	24872681	Chip, 680 ohm, 1/16W
R693	24366473	CF, 47k ohm
R693	24872681	Chip, 680 ohm, 1/16W
R694	24366103	CF, 10k ohm
R695	24366103	CF, 10k ohm
R696	24366473	CF, 47k ohm
R697	24366562	CF, 5600 ohm
R698	24366102	CF, 1k ohm
R699	24366104	CF, 100k ohm
R701	24872221	Chip, 220 ohm, 1/16W
R702	24872221	Chip, 220 ohm, 1/16W
R707	24872100	Chip, 10 ohm, 1/16W
R708	24872100	Chip, 10 ohm, 1/16W
R709	24872100	Chip, 10 ohm, 1/16W
R710	24872100	Chip, 10 ohm, 1/16W
R711	24872100	Chip, 10 ohm, 1/16W
R712	24872100	Chip, 10 ohm, 1/16W
R713	24872100	Chip, 10 ohm, 1/16W
R714	24872100	Chip, 10 ohm, 1/16W
R715	24872153	Chip, 15k ohm, 1/16W
R716	24872103	Chip, 10k ohm, 1/16W
R717	24872622	Chip, 6200 ohm, 1/16W
R718	24872152	Chip, 1500 ohm, 1/16W
R720	24872103	Chip, 10k ohm, 1/16W
R721	24872223	Chip, 22k ohm, 1/16W
R722	24872222	Chip, 2200 ohm, 1/16W
R725	24872754	Chip, 750k ohm, 1/16W
R727	24871221	Chip, 220 ohm, 1/8W
R728	24872393	Chip, 39k ohm, 1/16W
R729	24872153	Chip, 15k ohm, 1/16W
R735	24872911	Chip, 910 ohm, 1/16W
R736	24872911	Chip, 910 ohm, 1/16W
R737	24872152	Chip, 1500 ohm, 1/16W
R738	24872332	Chip, 3300 ohm, 1/16W
R739	24872362	Chip, 3600 ohm, 1/16W
R740	24872911	Chip, 910 ohm, 1/16W
R741	24872911	Chip, 910 ohm, 1/16W
R742	24872152	Chip, 1500 ohm, 1/16W
R743	24872332	Chip, 3300 ohm, 1/16W
R744	24872362	Chip, 3600 ohm, 1/16W
R745	24872911	Chip, 910 ohm, 1/16W
R746	24872911	Chip, 910 ohm, 1/16W
R747	24872152	Chip, 1500 ohm, 1/16W
R748	24872332	Chip, 3300 ohm, 1/16W
R749	24872362	Chip, 3600 ohm, 1/16W
R750	24872911	Chip, 910 ohm, 1/16W
R751	24872911	Chip, 910 ohm, 1/16W
R752	24872152	Chip, 1500 ohm, 1/16W
R753	24872332	Chip, 3300 ohm, 1/16W
R754	24872362	Chip, 3600 ohm, 1/16W
R755	24872911	Chip, 910 ohm, 1/16W
R756	24872911	Chip, 910 ohm, 1/16W
R757	24872152	Chip, 1500 ohm, 1/16W
R758	24872332	Chip, 3300 ohm, 1/16W
R759	24872362	Chip, 3600 ohm, 1/16W
R760	24872911	Chip, 910 ohm, 1/16W
R761	24872911	Chip, 910 ohm, 1/16W
R762	24872152	Chip, 1500 ohm, 1/16W
R763	24872332	Chip, 3300 ohm, 1/16W

Location No.	Part No.	Description
R764	24872362	Chip, 3600 ohm, 1/16W
R778	24872101	Chip, 100 ohm, 1/16W
R779	24872101	Chip, 100 ohm, 1/16W
R780	24872101	Chip, 100 ohm, 1/16W
R781	24872101	Chip, 100 ohm, 1/16W
R782	24872101	Chip, 100 ohm, 1/16W
R783	24872101	Chip, 100 ohm, 1/16W
R784	24872472	Chip, 4700 ohm, 1/16W
R785	24872472	Chip, 4700 ohm, 1/16W
R786	24872472	Chip, 4700 ohm, 1/16W
R787	24872472	Chip, 4700 ohm, 1/16W
R801	24366473	CF, 47k ohm
R802	24366102	CF, 1k ohm
R803	24366683	CF, 68k ohm
R804	24545109	FR, 1 ohm, 1/4W
R805	24366101	CF, 100 ohm
R806	24366101	CF, 100 ohm
R807	24367273	CF, 27k ohm, ±2%
R808	24552470	OMF, 47 ohm, 1/2W
R809	24321689	MF, 6.8 ohm, 1/2W
R810	24383680	OMF, 62 ohm, 2W
R811	24552121	OMF, 120 ohm, 1/2W
R812	24552390	OMF, 39 ohm, 1/2W
R814	24552821	OMF, 820 ohm, 1/2W
R816	24384223	OMF, 22k ohm, 3W
⚠R819	24009954	Metal-Glazed Resistor, 2.2M ohm, 1/2W
R820	24007061	Cement, 1.8 ohm, 2W
R821	24510479	Cement, 4.7 ohm, 5W
R822	24366102	CF, 1k ohm
R823	24554470	OMF, 47 ohm, 2W
R851	24545109	FR, 1 ohm, 1/4W
R852	24366272	CF, 2700 ohm
R853	24338568	MF, 0.56 ohm, 1W
R854	24553121	OMF, 120 ohm, 1W
R855	24553271	OMF, 270 ohm, 1W
R856	24366152	CF, 1500 ohm
R857	24381682	OMF, 6800 ohm, 1/2W
R858	24366102	CF, 1k ohm
R859	24382333	OMF, 33k ohm, 1W
R860	24366102	CF, 1k ohm
⚠R861	24005015	Metal-Glazed Resistor, 8.2M ohm, 1W
R862	24366223	CF, 22k ohm
R863	24366101	CF, 100 ohm
R870	24552100	OMF, 10 ohm, 1/2W
R901	24366101	CF, 100 ohm
R903	24942102	CC, 1k ohm, 1/2W
R905	24366390	CF, 39 ohm
R906	24366621	CF, 620 ohm
R908	24366560	CF, 56 ohm
R909	24366121	CF, 120 ohm
R911	24366101	CF, 100 ohm
R913	24942102	CC, 1k ohm, 1/2W
R915	24366330	CF, 33 ohm
R916	24366621	CF, 620 ohm
R918	24366430	CF, 43 ohm
R921	24366101	CF, 100 ohm
R923	24942102	CC, 1k ohm, 1/2W
R925	24366121	CF, 120 ohm
R926	24366621	CF, 620 ohm
R928	24366680	CF, 68 ohm
R931	24555153	OMF, 15k ohm, 3W
R932	24555153	OMF, 15k ohm, 3W

Location No.	Part No.	Description
R933	24000929	FR, 1.5 ohm, 1W
R935	24366150	CF, 15 ohm
R936	24366330	CF, 33 ohm
R941	24555153	OMF, 15k ohm, 3W
R942	24555153	OMF, 15k ohm, 3W
R943	24366103	CF, 10k ohm
R944	24366150	CF, 15 ohm
R945	24366680	CF, 68 ohm
R946	24366330	CF, 33 ohm
R949	24366101	CF, 100 ohm
R951	24555153	OMF, 15k ohm, 3W
R952	24555153	OMF, 15k ohm, 3W
R953	24366390	CF, 39 ohm
R956	24366102	CF, 1k ohm
R957	24366330	CF, 33 ohm
R961	24366102	CF, 1k ohm
R962	24366361	CF, 360 ohm
R964	24366332	CF, 3300 ohm
R965	24366471	CF, 470 ohm
R966	24366821	CF, 820 ohm
R967	24366102	CF, 1k ohm
R968	24366680	CF, 68 ohm
R969	24366103	CF, 10k ohm
R970	24366222	CF, 2200 ohm
R971	24367152	CF, 1500 ohm, ±2%
R972	24367471	CF, 470 ohm, ±2%
R973	24367681	CF, 680 ohm, ±2%
R974	24367681	CF, 680 ohm, ±2%
R975	24366242	CF, 2400 ohm
R976	24367562	CF, 5600 ohm, ±2%
R977	24367472	CF, 4700 ohm, ±2%
R978	24367681	CF, 680 ohm, ±2%
R6101	24366473	CF, 47k ohm
R6102	24366103	CF, 10k ohm
R6103	24366331	CF, 330 ohm
R6104	24366473	CF, 47k ohm
R6105	24366473	CF, 47k ohm
R7703	24366473	CF, 47k ohm
R7704	24366103	CF, 10k ohm
R7705	24366472	CF, 4700 ohm
R7706	24366222	CF, 2200 ohm
R7707	24366472	CF, 4700 ohm
R7708	24366472	CF, 4700 ohm
R7710	24384680	OMF, 68 ohm, 3W
R7711	24323229	MF, 2.2 ohm, 2W
R7712	24366472	CF, 4700 ohm
R7713	24366472	CF, 4700 ohm
R7715	24384680	OMF, 68 ohm, 3W
R7716	24323229	MF, 2.2 ohm, 2W
R7717	24366472	CF, 4700 ohm
R7718	24366472	CF, 4700 ohm
R7720	24384680	OMF, 68 ohm, 3W
R7721	24323229	MF, 2.2 ohm, 2W
R7722	24366472	CF, 4700 ohm
R7723	24366472	CF, 4700 ohm
R7725	24384680	OMF, 68 ohm, 3W
R7726	24323229	MF, 2.2 ohm, 2W
R7727	24366472	CF, 4700 ohm
R7728	24366472	CF, 4700 ohm
R7730	24384680	OMF, 68 ohm, 3W
R7731	24323229	MF, 2.2 ohm, 2W
R7732	24366472	CF, 4700 ohm
R7733	24366472	CF, 4700 ohm
R7735	24384680	OMF, 68 ohm, 3W

Location No.	Part No.	Description
R7736	24323229	MF, 2.2 ohm, 2W
R7738	24383101	OMF, 100 ohm, 2W
R7741	24366471	CF, 470 ohm
R7742	24366472	CF, 4700 ohm
R7743	24366223	CF, 22k ohm
R7744	24366102	CF, 1k ohm
R7745	24366222	CF, 2200 ohm
R7746	24366223	CF, 22k ohm
R7747	24366222	CF, 2200 ohm
R7749	24366331	CF, 330 ohm
R7750	24323278	MF, 0.27 ohm, 2W
R7751	24366471	CF, 470 ohm
R7752	24366101	CF, 100 ohm
R7753	24366101	CF, 100 ohm
R7754	24366101	CF, 100 ohm
R7755	24366102	CF, 1k ohm
R7757	24366223	CF, 22k ohm
R7758	24366222	CF, 2200 ohm
R7763	24366471	CF, 470 ohm
R7764	24366331	CF, 330 ohm
R7765	24339398	MF, 0.39 ohm, 2W
R7766	24366223	CF, 22k ohm
R7767	24366223	CF, 22k ohm
R7768	24366102	CF, 1k ohm
R7771	24366102	CF, 1k ohm
R7772	24366102	CF, 1k ohm
R7775	24366273	CF, 27k ohm
R7776	24366472	CF, 4700 ohm
R7777	24366273	CF, 27k ohm
R7778	24366472	CF, 4700 ohm
R7779	24366102	CF, 1k ohm
R7780	24366102	CF, 1k ohm
R7781	24366333	CF, 33k ohm
R7782	24339828	MF, 0.82 ohm, 2W
R7783	24366331	CF, 330 ohm
R7784	24366471	CF, 470 ohm
R7785	24366222	CF, 2200 ohm
R7786	24366103	CF, 10k ohm
R7787	24366104	CF, 100k ohm
R7788	24366103	CF, 10k ohm
R7789	24366471	CF, 470 ohm
R7790	24552182	OMF, 1800 ohm, 1/2W
R7791	24552681	OMF, 680 ohm, 1/2W
R7792	24366471	CF, 470 ohm
R7793	24552182	OMF, 1800 ohm, 1/2W
R7794	24366223	CF, 22k ohm
R8010	24366684	CF, 680k ohm
R8020	24366564	CF, 560k ohm
R8040	24555683	OMF, 68k ohm, 3W
R8050	24553470	OMF, 47 ohm, 1W
R8060	24366102	CF, 1k ohm
R8070	24366102	CF, 1k ohm
R8100	24366103	CF, 10k ohm
R8110	24366222	CF, 2200 ohm
R8120	24366102	CF, 1k ohm
R8130	24555223	OMF, 22k ohm, 3W
R8140	24019466	MF, 0.39 ohm, 2W
R8150	24338479	MF, 4.7 ohm, 1W
R8190	24366681	CF, 680 ohm
R8301	24366472	CF, 4700 ohm
R8302	24366274	CF, 270k ohm
R8510	24366473	CF, 47k ohm
R8520	24366101	CF, 100 ohm
R8530	24366562	CF, 5600 ohm

Location No.	Part No.	Description
R8540	24545109	FR, 1 ohm, 1/4W
R8560	24366103	CF, 10k ohm
R8570	24366102	CF, 1k ohm
R8580	24366152	CF, 1500 ohm
R8590	24005008	Metal-Glazed Resistor, 10M ohm, 1W
R9601	24366471	CF, 470 ohm
R9602	24366362	CF, 3600 ohm
R9603	24366392	CF, 3900 ohm
R9604	24366272	CF, 2700 ohm
R9605	24366682	CF, 6800 ohm
R9606	24366392	CF, 3900 ohm
R9613	24366680	CF, 68 ohm
R9614	24366390	CF, 39 ohm
R9615	24366101	CF, 100 ohm
R9616	24366102	CF, 1k ohm
RA01	24366102	CF, 1k ohm
RA02	24366102	CF, 1k ohm
RA03	24366102	CF, 1k ohm
RA04	24366102	CF, 1k ohm
RA06	24366102	CF, 1k ohm
RA07	24366102	CF, 1k ohm
RA08	24366102	CF, 1k ohm
RA09	24366102	CF, 1k ohm
RA10	24366102	CF, 1k ohm
RA11	24366102	CF, 1k ohm
RA12	24366102	CF, 1k ohm
RA13	24366102	CF, 1k ohm
RA14	24366102	CF, 1k ohm
RA15	24366103	CF, 10k ohm
RA19	24366331	CF, 330 ohm
RA20	24366102	CF, 1k ohm
RA21	24366102	CF, 1k ohm
RA22	24366102	CF, 1k ohm
RA24	24366153	CF, 15k ohm
RA31	24366103	CF, 10k ohm
RA32	24366103	CF, 10k ohm
RA34	24366102	CF, 1k ohm
RA36	24366102	CF, 1k ohm
RA37	24366102	CF, 1k ohm
RA53	24366101	CF, 100 ohm
RA55	24366101	CF, 100 ohm
RA57	24366101	CF, 100 ohm
RA59	24366102	CF, 1k ohm
RA61	24366102	CF, 1k ohm
RA70	24366333	CF, 33k ohm
RA71	24366103	CF, 10k ohm
RA71	24366683	CF, 68k ohm
RA72	24366103	CF, 10k ohm
RA72	24366223	CF, 22k ohm
RA73	24366103	CF, 10k ohm
RA75	24366333	CF, 33k ohm
RA76	24366103	CF, 10k ohm
RA77	24366223	CF, 22k ohm
RA78	24366683	CF, 68k ohm
RA91	24366103	CF, 10k ohm
RA92	24366472	CF, 4700 ohm
RA93	24366103	CF, 10k ohm
RA94	24366103	CF, 10k ohm
RA95	24366103	CF, 10k ohm
RA96	24366103	CF, 10k ohm
RA97	24366472	CF, 4700 ohm
RA101	24366102	CF, 1k ohm
RA102	24366473	CF, 47k ohm

Location No.	Part No.	Description
RA104	24366682	CF, 6800 ohm
RA105	24366103	CF, 10k ohm
RA106	24366682	CF, 6800 ohm
RA107	24366472	CF, 4700 ohm
RA108	24366472	CF, 4700 ohm
RA120	24366472	CF, 4700 ohm
RA140	24366153	CF, 15k ohm
RA150	24366103	CF, 10k ohm
RA310	24366101	CF, 100 ohm
RB01	24366271	CF, 270 ohm
RB02	24366221	CF, 220 ohm
RB03	24366101	CF, 100 ohm
RB04	24366223	CF, 22k ohm
RB05	24366471	CF, 470 ohm
RB09	24366470	CF, 47 ohm
RB11	24366103	CF, 10k ohm
RB40	24366103	CF, 10k ohm
RB43	24366822	CF, 8200 ohm
RB44	24366103	CF, 10k ohm
RB45	24366101	CF, 100 ohm
RB81	24366122	CF, 1200 ohm
RB82	24366123	CF, 12k ohm
RB83	24366123	CF, 12k ohm
RB84	24366562	CF, 5600 ohm
RB90	24366392	CF, 3900 ohm
RB91	24366473	CF, 47k ohm
RB92	24366271	CF, 270 ohm
RB93	24366271	CF, 270 ohm
RB94	24366222	CF, 2200 ohm
RB95	24366222	CF, 2200 ohm
RB96	24366273	CF, 27k ohm
RB97	24366273	CF, 27k ohm
RB98	24366102	CF, 1k ohm
RD85	24366151	CF, 150 ohm
RD87	24366151	CF, 150 ohm
RD88	24366222	CF, 2200 ohm
RD89	24366151	CF, 150 ohm
RF01	24872332	Chip, 3300 ohm, 1/16W
RF03	24872682	Chip, 6800 ohm, 1/16W
RF04	24872223	Chip, 22k ohm, 1/16W
RF06	24872102	Chip, 1k ohm, 1/16W
RF08	24872100	Chip, 10 ohm, 1/16W
RF09	24872100	Chip, 10 ohm, 1/16W
RF10	24872100	Chip, 10 ohm, 1/16W
RF11	24872103	Chip, 10k ohm, 1/16W
RF12	24872101	Chip, 100 ohm, 1/16W
RF13	24872101	Chip, 100 ohm, 1/16W
RF14	24872101	Chip, 100 ohm, 1/16W
RF15	24872103	Chip, 10k ohm, 1/16W
RF16	24872471	Chip, 470 ohm, 1/16W
RF20	24872472	Chip, 4700 ohm, 1/16W
RF21	24000824	Chip, Jumper, 2125 type
RF22	24872102	Chip, 1k ohm, 1/16W
RF24	24872102	Chip, 1k ohm, 1/16W
RF26	24872102	Chip, 1k ohm, 1/16W
RF27	24872103	Chip, 10k ohm, 1/16W
RF28	24872102	Chip, 1k ohm, 1/16W
RF29	24872103	Chip, 10k ohm, 1/16W
RF30	24872103	Chip, 10k ohm, 1/16W
RF38	24872153	Chip, 15k ohm, 1/16W
RF39	24872472	Chip, 4700 ohm, 1/16W
RJ02	24872101	Chip, 100 ohm, 1/16W
RQ01	24872102	Chip, 1k ohm, 1/16W
RQ03	24872102	Chip, 1k ohm, 1/16W

Location No.	Part No.	Description
RQ04	24872511	Chip, 510 ohm, 1/16W
RQ05	24872471	Chip, 470 ohm, 1/16W
RQ06	24872471	Chip, 470 ohm, 1/16W
RQ07	24872103	Chip, 10k ohm, 1/16W
RQ08	24872102	Chip, 1k ohm, 1/16W
RQ09	24872102	Chip, 1k ohm, 1/16W
RQ10	24872102	Chip, 1k ohm, 1/16W
RQ11	24872561	Chip, 560 ohm, 1/16W
RQ12	24872561	Chip, 560 ohm, 1/16W
RQ13	24872203	Chip, 20k ohm, 1/16W
RQ14	24872273	Chip, 27k ohm, 1/16W
RQ20	24872563	Chip, 56k ohm, 1/16W
RR01	24366102	CF, 1k ohm
RR02	24366104	CF, 100k ohm
RR03	24366222	CF, 2200 ohm
RR04	24366101	CF, 100 ohm
RR04	24872102	Chip, 1k ohm, 1/16W
RR05	24366102	CF, 1k ohm
RR05	24872102	Chip, 1k ohm, 1/16W
RR06	24000824	Chip, Jumper, 2125 type
RR06	24366223	CF, 22k ohm
RR07	24000824	Chip, Jumper, 2125 type
RR07	24366152	CF, 1500 ohm
RR08	24366332	CF, 3300 ohm
RR09	24000824	Chip, Jumper, 2125 type
RR09	24366222	CF, 2200 ohm
RR10	24366102	CF, 1k ohm
RR10	24872103	Chip, 10k ohm, 1/16W
RR11	24366152	CF, 1500 ohm
RR11	24872473	Chip, 47k ohm, 1/16W
RR12	24366152	CF, 1500 ohm
RR12	24872102	Chip, 1k ohm, 1/16W
RR13	24366152	CF, 1500 ohm
RR13	24872622	Chip, 6200 ohm, 1/16W
RR15	24000824	Chip, Jumper, 2125 type
RR15	24366391	CF, 390 ohm
RR16	24000824	Chip, Jumper, 2125 type
RR16	24366391	CF, 390 ohm
RR17	24000824	Chip, Jumper, 2125 type
RR17	24366391	CF, 390 ohm
RR18	24000824	Chip, Jumper, 2125 type
RR20	24872103	Chip, 10k ohm, 1/16W
RR22	24366103	CF, 10k ohm
RR23	24366103	CF, 10k ohm
RR24	24000824	Chip, Jumper, 2125 type
RR25	24872102	Chip, 1k ohm, 1/16W
RR28	24872473	Chip, 47k ohm, 1/16W
RR29	24872473	Chip, 47k ohm, 1/16W
RR31	24366331	CF, 330 ohm
RR32	24366331	CF, 330 ohm
RR32	24872331	Chip, 330 ohm, 1/16W
RR33	24366331	CF, 330 ohm
RR33	24872331	Chip, 330 ohm, 1/16W
RR34	24366102	CF, 1k ohm
RR34	24872331	Chip, 330 ohm, 1/16W
RR35	24366392	CF, 3900 ohm
RR36	24366392	CF, 3900 ohm
RR37	24366392	CF, 3900 ohm
RR40	24366102	CF, 1k ohm
RR41	24366332	CF, 3300 ohm
RR48	24366222	CF, 2200 ohm
RR62	24366102	CF, 1k ohm
RR63	24366332	CF, 3300 ohm
RR64	24366152	CF, 1500 ohm

Location No.	Part No.	Description
RR65	24366102	CF, 1k ohm
RR66	24366101	CF, 100 ohm
RR67	24366221	CF, 220 ohm
RR68	24366332	CF, 3300 ohm
RR69	24366152	CF, 1500 ohm
RR70	24366102	CF, 1k ohm
RR71	24366332	CF, 3300 ohm
RR72	24366332	CF, 3300 ohm
RR73	24366332	CF, 3300 ohm
RR81	24366221	CF, 220 ohm
RR82	24366101	CF, 100 ohm
RR83	24366221	CF, 220 ohm
RR84	24366101	CF, 100 ohm
RR85	24366102	CF, 1k ohm
RR86	24366152	CF, 1500 ohm
RR87	24366332	CF, 3300 ohm
RR88	24366101	CF, 100 ohm
RR99	24366473	CF, 47k ohm
RS01	24872681	Chip, 680 ohm, 1/16W
RS02	24872681	Chip, 680 ohm, 1/16W
RS03	24872101	Chip, 100 ohm, 1/16W
RS04	24872101	Chip, 100 ohm, 1/16W
RS05	24872472	Chip, 4700 ohm, 1/16W
RS06	24872472	Chip, 4700 ohm, 1/16W
RS07	24872472	Chip, 4700 ohm, 1/16W
RS08	24872472	Chip, 4700 ohm, 1/16W
RS09	24872472	Chip, 4700 ohm, 1/16W
RS10	24872472	Chip, 4700 ohm, 1/16W
RS13	24872101	Chip, 100 ohm, 1/16W
RS14	24872101	Chip, 100 ohm, 1/16W
RS15	24872104	Chip, 100k ohm, 1/16W
RS16	24872104	Chip, 100k ohm, 1/16W
RS17	24872223	Chip, 22k ohm, 1/16W
RS18	24872223	Chip, 22k ohm, 1/16W
RS19	24872102	Chip, 1k ohm, 1/16W
RS20	24872102	Chip, 1k ohm, 1/16W
RS21	24872222	Chip, 2200 ohm, 1/16W
RS22	24872222	Chip, 2200 ohm, 1/16W
RS23	24872101	Chip, 100 ohm, 1/16W
RS24	24872101	Chip, 100 ohm, 1/16W
RS27	24872104	Chip, 100k ohm, 1/16W
RS28	24872104	Chip, 100k ohm, 1/16W
RS29	24872223	Chip, 22k ohm, 1/16W
RS30	24872223	Chip, 22k ohm, 1/16W
RS31	24872103	Chip, 10k ohm, 1/16W
RS32	24872104	Chip, 100k ohm, 1/16W
RS35	24872223	Chip, 22k ohm, 1/16W
RS36	24872223	Chip, 22k ohm, 1/16W
RS37	24872104	Chip, 100k ohm, 1/16W
RS38	24872104	Chip, 100k ohm, 1/16W
RS43	24872681	Chip, 680 ohm, 1/16W
RS44	24872681	Chip, 680 ohm, 1/16W
RS45	24872681	Chip, 680 ohm, 1/16W
RS46	24872681	Chip, 680 ohm, 1/16W
RS56	24872102	Chip, 1k ohm, 1/16W
RS57	24872223	Chip, 22k ohm, 1/16W
RS58	24872223	Chip, 22k ohm, 1/16W
RS59	24872681	Chip, 680 ohm, 1/16W
RS60	24872102	Chip, 1k ohm, 1/16W
RV01	24872101	Chip, 100 ohm, 1/16W
RV02	24872101	Chip, 100 ohm, 1/16W
RV03	24872101	Chip, 100 ohm, 1/16W
RV04	24872101	Chip, 100 ohm, 1/16W
RV05	24872101	Chip, 100 ohm, 1/16W

Location No.	Part No.	Description
RV06	24872101	Chip, 100 ohm, 1/16W
RV07	24872162	Chip, 1600 ohm, 1/16W
RV08	24872162	Chip, 1600 ohm, 1/16W
RV09	24872101	Chip, 100 ohm, 1/16W
RV10	24872101	Chip, 100 ohm, 1/16W
RV12	24872681	Chip, 680 ohm, 1/16W
RV13	24872681	Chip, 680 ohm, 1/16W
RV16	24872271	Chip, 270 ohm, 1/16W
RV18	24872123	Chip, 12k ohm, 1/16W
RV19	24872101	Chip, 100 ohm, 1/16W
RV20	24872101	Chip, 100 ohm, 1/16W
RV21	24872151	Chip, 150 ohm, 1/16W
RV23	24552101	OMF, 100 ohm, 1/2W
RV25	24872101	Chip, 100 ohm, 1/16W
RV26	24366181	CF, 180 ohm
RV27	24872750	Chip, 75 ohm, 1/16W
RV28	24872683	Chip, 68k ohm, 1/16W
RV29	24872273	Chip, 27k ohm, 1/16W
RV30	24872750	Chip, 75 ohm, 1/16W
RV31	24872750	Chip, 75 ohm, 1/16W
RV32	24872750	Chip, 75 ohm, 1/16W
RV33	24872123	Chip, 12k ohm, 1/16W
RV34	24872123	Chip, 12k ohm, 1/16W
RV35	24872103	Chip, 10k ohm, 1/16W
RV36	24872101	Chip, 100 ohm, 1/16W
RV37	24872750	Chip, 75 ohm, 1/16W
RV60	24366681	CF, 680 ohm
RV60	24872102	Chip, 1k ohm, 1/16W
RV61	24366681	CF, 680 ohm
RV61	24552101	OMF, 100 ohm, 1/2W
RV62	24872101	Chip, 100 ohm, 1/16W
RV63	24552151	OMF, 150 ohm, 1/2W
RV64	24872750	Chip, 75 ohm, 1/16W
RV65	24552101	OMF, 100 ohm, 1/2W
RV66	24872101	Chip, 100 ohm, 1/16W
RV67	24552151	OMF, 150 ohm, 1/2W
RV68	24872750	Chip, 75 ohm, 1/16W
RV70	24872101	Chip, 100 ohm, 1/16W
RV71	24872472	Chip, 4700 ohm, 1/16W
RV73	24872103	Chip, 10k ohm, 1/16W
RV74	24872104	Chip, 100k ohm, 1/16W
RV78	24872100	Chip, 10 ohm, 1/16W
RV79	24872102	Chip, 1k ohm, 1/16W
RV80	24872271	Chip, 270 ohm, 1/16W
RV81	24872750	Chip, 75 ohm, 1/16W
RV82	24872101	Chip, 100 ohm, 1/16W
RV85	24872750	Chip, 75 ohm, 1/16W
RV86	24872750	Chip, 75 ohm, 1/16W
RV87	24872750	Chip, 75 ohm, 1/16W
RV89	24872750	Chip, 75 ohm, 1/16W
RV90	24872681	Chip, 680 ohm, 1/16W
RV91	24872681	Chip, 680 ohm, 1/16W
RV92	24872100	Chip, 10 ohm, 1/16W
RV93	24872104	Chip, 100k ohm, 1/16W
RV94	24872103	Chip, 10k ohm, 1/16W
RV95	24872472	Chip, 4700 ohm, 1/16W
RV97	24872101	Chip, 100 ohm, 1/16W
RV800	24366100	CF, 10 ohm
RV801	24366222	CF, 2200 ohm
RW02	24366271	CF, 270 ohm
RW09	24366563	CF, 56k ohm
RW13	24366393	CF, 39k ohm
RW14	24552121	OMF, 120 ohm, 1/2W
RW15	24366223	CF, 22k ohm

Location No.	Part No.	Description
RW16	24366273	CF, 27k ohm
RW17	24366333	CF, 33k ohm
RW18	24366101	CF, 100 ohm
RW19	24366100	CF, 10 ohm
RW20	24366392	CF, 3900 ohm
RW22	24366102	CF, 1k ohm
RW23	24366471	CF, 470 ohm
RW24	24366470	CF, 47 ohm
RW25	24366182	CF, 1800 ohm
RW30	24552100	OMF, 10 ohm, 1/2W
RW31	24552331	OMF, 330 ohm, 1/2W
RW32	24366820	CF, 82 ohm
RW33	24366683	CF, 68k ohm
RW34	24366820	CF, 82 ohm
RW35	24366683	CF, 68k ohm
RW36	24366330	CF, 33 ohm
RW37	24366152	CF, 1500 ohm
RW38	24366102	CF, 1k ohm
RW39	24366152	CF, 1500 ohm
RW40	24366330	CF, 33 ohm
RW41	24366279	CF, 2.7 ohm
RW42	24366279	CF, 2.7 ohm
RW43	24554221	OMF, 220 ohm, 2W
RW44	24366122	CF, 1200 ohm
RW45	24366122	CF, 1200 ohm
RZ01	24872102	Chip, 1k ohm, 1/16W
RZ02	24872102	Chip, 1k ohm, 1/16W
RZ03	24872332	Chip, 3300 ohm, 1/16W
RZ04	24872102	Chip, 1k ohm, 1/16W
RZ05	24872221	Chip, 220 ohm, 1/16W
RZ06	24872821	Chip, 820 ohm, 1/16W
RZ07	24872101	Chip, 100 ohm, 1/16W
RZ08	24872471	Chip, 470 ohm, 1/16W
RZ09	24872101	Chip, 100 ohm, 1/16W
RZ10	24872222	Chip, 2200 ohm, 1/16W
RZ11	24872101	Chip, 100 ohm, 1/16W
RZ12	24872102	Chip, 1k ohm, 1/16W
RZ13	24872102	Chip, 1k ohm, 1/16W
RZ14	24872102	Chip, 1k ohm, 1/16W
RZ15	24872102	Chip, 1k ohm, 1/16W
RZ17	24872221	Chip, 220 ohm, 1/16W
RZ18	24872471	Chip, 470 ohm, 1/16W
RZ19	24872102	Chip, 1k ohm, 1/16W
RZ20	24872101	Chip, 100 ohm, 1/16W
RZ22	24872222	Chip, 2200 ohm, 1/16W
RZ29	24872331	Chip, 330 ohm, 1/16W
RZ30	24872331	Chip, 330 ohm, 1/16W

COILS & TRANSFORMERS

Location No.	Part No.	Description
L101	23221803	Coil, Choke, TLN3040D
L200	23289479	Coil, Peaking, TRF44R7AF
L201	23289100	Coil, Peaking, TRF4100AF
L301	23103859	Coil (Ferrite Bead), TEM2011
L303	23237975	Coil, Peaking, TRF4101AC
L333	23238702	Coil, Peaking, TRF4101AJ
L400	23289101	Coil, Peaking, TRF4101AF
L441	23233947	Coil, Linearity, TLN2144G
L441A	23960136	Adhesive, TSE3843-W
L442	23248186	Coil, Choke, TLN3346AD
L461	23248115	Coil, Choke, TLN3367D
L462	23231135	Deflection Yoke, TDY707AS(R)
L463	23231135	Deflection Yoke, TDY707AS(R)
L464	23231135	Deflection Yoke, TDY707AS(R)
L465	23103880	Coil (Ferrite Bead), TEM2011Y

Location No.	Part No.	Description
L472	23102441	Magnet, MAG-1094
L473	23102441	Magnet, MAG-1094
L474	23102441	Magnet, MAG-1094
L501	23289100	Coil, Peaking, TRF4100AF
L503	23289470	Coil, Peaking, TRF4470AF
L510	23238718	Coil, Peaking, TRF4479AJ
L512	23103845	Coil, TEM2030AY
L513	23103845	Coil, TEM2030AY
L602	23238714	Coil, Peaking, TRF4100AJ
L603	23238714	Coil, Peaking, TRF4100AJ
L605	23238562	Coil, Peaking, TRF4109AJ
L606	23103845	Coil, TEM2030AY
L6101	23103859	Coil (Ferrite Bead), TEM2011
L671	23103888	Chip (Ferrite Bead), TEM2131AM
L672	23103888	Chip (Ferrite Bead), TEM2131AM
L673	23103888	Chip (Ferrite Bead), TEM2131AM
L674	23103888	Chip (Ferrite Bead), TEM2131AM
L676	23103832	Chip (Ferrite Bead), TEM2125M
L677	23103832	Chip (Ferrite Bead), TEM2125M
L682	23103832	Chip (Ferrite Bead), TEM2125M
L683	23103832	Chip (Ferrite Bead), TEM2125M
L684	23289109	Coil, Peaking, TRF41R0AF
L685	23289109	Coil, Peaking, TRF41R0AF
L701	23238562	Coil, Peaking, TRF4109AJ
L702	23238562	Coil, Peaking, TRF4109AJ
L707	23238562	Coil, Peaking, TRF4109AJ
L708	23238562	Coil, Peaking, TRF4109AJ
L709	23238562	Coil, Peaking, TRF4109AJ
L710	23238562	Coil, Peaking, TRF4109AJ
L711	23238562	Coil, Peaking, TRF4109AJ
L712	23238562	Coil, Peaking, TRF4109AJ
L713	23238562	Coil, Peaking, TRF4109AJ
L714	23238562	Coil, Peaking, TRF4109AJ
L719	23232878	Coil, Variable, TRF3503K
L720	23289102	Coil, Peaking, TRF4102AJ
L721	23237805	Coil, Peaking, TRF4222AC
L722	23289102	Coil, Peaking, TRF4102AJ
L723	23237805	Coil, Peaking, TRF4222AC
L724	23289102	Coil, Peaking, TRF4102AJ
L725	23237805	Coil, Peaking, TRF4222AC
L726	23289102	Coil, Peaking, TRF4102AJ
L727	23237805	Coil, Peaking, TRF4222AC
L728	23289102	Coil, Peaking, TRF4102AJ
L729	23237805	Coil, Peaking, TRF4222AC
L730	23289102	Coil, Peaking, TRF4102AJ
L731	23237805	Coil, Peaking, TRF4222AC
L737	23289560	Coil, Peaking, TRF4560
L738	23289560	Coil, Peaking, TRF4560
L739	23289560	Coil, Peaking, TRF4560
L740	23289560	Coil, Peaking, TRF4560
L742	23103866	Chip (Ferrite Bead), TEM2105T
L743	23103866	Chip (Ferrite Bead), TEM2105T
L744	23103866	Chip (Ferrite Bead), TEM2105T
L745	23103866	Chip (Ferrite Bead), TEM2105T
L746	23103866	Chip (Ferrite Bead), TEM2105T
L747	23103866	Chip (Ferrite Bead), TEM2105T

Location No.	Part No.	Description
L748	23103866	Chip (Ferrite Bead), TEM2105T
L749	23103866	Chip (Ferrite Bead), TEM2105T
L801	23248213	Coil, Choke, TLN3481AH
L802	23248213	Coil, Choke, TLN3481AH
L803	23103859	Coil (Ferrite Bead), TEM2011
L804	23103859	Coil (Ferrite Bead), TEM2011
L853	23248035	Coil, Choke, TLN3278D
L854	23248073	Coil, Choke, TLN3299D
L855	23248073	Coil, Choke, TLN3299D
L856	23248073	Coil, Choke, TLN3299D
L857	23248073	Coil, Choke, TLN3299D
L858	23103859	Coil (Ferrite Bead), TEM2011
L859	23103859	Coil (Ferrite Bead), TEM2011
L860	23280022	Coil, Peaking, TRF4101AZ
L861	23103859	Coil (Ferrite Bead), TEM2011
L862	23248073	Coil, Choke, TLN3299D
L863	23103859	Coil (Ferrite Bead), TEM2011
L864	23103859	Coil (Ferrite Bead), TEM2011
L865	23103859	Coil (Ferrite Bead), TEM2011
L866	23248073	Coil, Choke, TLN3299D
L867	70211045	Coil, Choke, 0.02mH
L868	23103859	Coil (Ferrite Bead), TEM2011
L869	23103859	Coil (Ferrite Bead), TEM2011
L870	23248073	Coil, Choke, TLN3299D
L871	23248073	Coil, Choke, TLN3299D
L872	23248035	Coil, Choke, TLN3278D
L892	23238506	Coil, Peaking, TRF4229AJ
L893	23238714	Coil, Peaking, TRF4100AJ
L911	23237987	Coil, Peaking, TRF4100AC
L961	23289100	Coil, Peaking, TRF4100AF
L962	23237991	Coil, Peaking, TRF4479AC
L963	23237975	Coil, Peaking, TRF4101AC
L7701	23103859	Coil (Ferrite Bead), TEM2011
L7702	23103859	Coil (Ferrite Bead), TEM2011
L7703	23103859	Coil (Ferrite Bead), TEM2011
L7704	23103859	Coil (Ferrite Bead), TEM2011
L7705	23103859	Coil (Ferrite Bead), TEM2011
L7706	23103859	Coil (Ferrite Bead), TEM2011
L8100	23103859	Coil (Ferrite Bead), TEM2011
L8120	23103859	Coil (Ferrite Bead), TEM2011
L8130	70211045	Coil, Choke, 0.02mH
L8140	70211045	Coil, Choke, 0.02mH
L8520	70211045	Coil, Choke, 0.02mH
L8530	70211045	Coil, Choke, 0.02mH
LA01	23289100	Coil, Peaking, TRF4100AF
LB01	23262261	Coil, IF, TRF1177D
LC05	23238562	Coil, Peaking, TRF4109AJ
LC06	23103859	Coil (Ferrite Bead), TEM2011
LD89	23289470	Coil, Peaking, TRF4470AF
LF01	23238506	Coil, Peaking, TRF4229AJ
LF02	23238506	Coil, Peaking, TRF4229AJ
LF03	23238506	Coil, Peaking, TRF4229AJ
LF04	23238506	Coil, Peaking, TRF4229AJ
LF05	23238506	Coil, Peaking, TRF4229AJ
LF06	23238562	Coil, Peaking, TRF4109AJ
LF07	23238562	Coil, Peaking, TRF4109AJ
LF08	23238714	Coil, Peaking, TRF4100AJ
LF09	23238714	Coil, Peaking, TRF4100AJ
LF10	23238562	Coil, Peaking, TRF4109AJ
LF11	23289109	Coil, Peaking, TRF41R0AF
LF13	23289100	Coil, Peaking, TRF4100AF
LF17	23289100	Coil, Peaking, TRF4100AF
LQ01	23238709	Coil, Peaking, TRF4270AJ
LQ02	23237991	Coil, Peaking, TRF4479AC

Location No.	Part No.	Description
LQ03	23237991	Coil, Peaking, TRF4479AC
LQ04	23238718	Coil, Peaking, TRF4479AJ
LR01	23289100	Coil, Peaking, TRF4100AF
LR01	23289109	Coil, Peaking, TRF41R0AF
LR02	23289109	Coil, Peaking, TRF41R0AF
LR04	23115599	Diode, 1N4148
LS02	23103859	Coil (Ferrite Bead), TEM2011
LV06	23103832	Chip (Ferrite Bead), TEM2125M
LV07	23103832	Chip (Ferrite Bead), TEM2125M
LV08	23289330	Coil, Peaking, TRF4330AF
LV09	23289100	Coil, Peaking, TRF4100AF
LV10	23289220	Coil, Peaking, TRF4220AF
LV11	23289330	Coil, Peaking, TRF4330AF
LV42	23289100	Coil, Peaking, TRF4100AF
LV43	23289100	Coil, Peaking, TRF4100AF
LV47	23238562	Coil, Peaking, TRF4109AJ
LW02	23261974	Coil, Choke, HC5-035
LW04	23103859	Coil (Ferrite Bead), TEM2011
LW05	23103859	Coil (Ferrite Bead), TEM2011
LZ01	23238710	Coil, Peaking, TRF4220AJ
LZ02	23238714	Coil, Peaking, TRF4100AJ
LZ03	23238714	Coil, Peaking, TRF4100AJ
LZ04	23238714	Coil, Peaking, TRF4100AJ
LZ05	23238714	Coil, Peaking, TRF4100AJ
LZ08	23238707	Coil, Peaking, TRF4390AJ
LZ09	70131060	Baze Filter, ZBF253D-00
LZ10	70131060	Baze Filter, ZBF253D-00
T400	23224364	Transformer, Focus, TLN2168AH
T401	23224367	Transformer, Horiz. Drive, TLN1098AH
⚠T461	23236552	Transformer, Flyback, TFB3078BD
T461A	23192917	Anode Cap, TCCP5149
T461B	23960136	Adhesive, TSE3843-W
⚠T461Z	23236508	Transformer, Flyback, TFB3078ZD
T801	23211670	Line Filter, TRF3164G
T8010	23217361	Transformer, Choke, TPW2009AZ
⚠T803	23217432	Transformer, Power, TPW1562AZ
⚠T862	23217433	Transformer, Converter, TPW3426AS
T864	23217438	Transformer, TPW3431AR
T8020	23211661	Line Filter, TRF3192
T8030	23211661	Line Filter, TRF3192

SEMICONDUCTORS

Q201	A6335470	Transistor, 2SC2712-Y
Q202	A6541130	Transistor, 2SA1162-Y
Q203	A6541130	Transistor, 2SA1162-Y
Q204	A6541130	Transistor, 2SA1162-Y
Q205	A6541130	Transistor, 2SA1162-Y
Q206	A6335470	Transistor, 2SC2712-Y
Q261	A6335470	Transistor, 2SC2712-Y
Q262	A6541130	Transistor, 2SA1162-Y
Q270	A6004040	Transistor, RN2004
Q271	A6004040	Transistor, RN2004
Q272	A6014040	Transistor, RN2404
Q273	A6335470	Transistor, 2SC2712-Y
Q281	23904943	IC, MM1111XS

Location No.	Part No.	Description
Q282	A6534040	Transistor, 2SA1015-Y
Q291	A6330069	Transistor, 2CS2482 FA-1
Q301	23319787	IC, LA7833S
Q301B	70391355	Screw, BITTB3X8 SZN
Q302	B0384625	IC, TA8859CP
Q340	A6317440	Transistor, 2SC1815-Y
Q341	A6534040	Transistor, 2SA1015-Y
Q350	A6317440	Transistor, 2SC1815-Y
Q351	A6534040	Transistor, 2SA1015-Y
Q352	A6002030	Transistor, RN1203
Q353	A6002030	Transistor, RN1203
Q354	A6534145	Transistor, 2SA1020-Y(C)
Q360	B0350510	IC, TA75558S
Q361	23314548	Transistor, 2SC4256
Q370	A6534040	Transistor, 2SA1015-Y
Q402	A6330069	Transistor, 2CS2482 FA-1
Q404	A6873777	Transistor, 2SD2553
Q404B	72471082	Screw, BRDT2W3X10 SZN
Q420	23314141	Transistor, 2SC3852
Q420B	70391356	Screw, BITTB3X10 SZN
Q421	A6317440	Transistor, 2SC1815-Y
Q430	23314707	Transistor, 2SD1944, H
Q460	A6625365	Transistor, 2SB688-O(BS)
Q460B	72471082	Screw, BRDT2W3X10 SZN
Q461	A6317440	Transistor, 2SC1815-Y
Q462	A6317440	Transistor, 2SC1815-Y
Q470	A6317440	Transistor, 2SC1815-Y
Q480	23314246	Transistor, 2SC2023LF-4
Q483	B0345651	IC, TA7508P(J)
Q501	B0386208	IC, TA1276AN
Q502	A6335470	Transistor, 2SC2712-Y
Q503	A6541130	Transistor, 2SA1162-Y
Q504	A6335470	Transistor, 2SC2712-Y
Q518	A6335470	Transistor, 2SC2712-Y
Q601	23318413	IC, LA4282
Q611	A6534040	Transistor, 2SA1015-Y
Q612	A6534040	Transistor, 2SA1015-Y
Q621	B0376795	IC, TA8200AH
Q621B	70391355	Screw, BITTB3X8 SZN
Q622	A6317440	Transistor, 2SC1815-Y
Q631	A6317440	Transistor, 2SC1815-Y
Q641	B0376795	IC, TA8200AH
Q641B	70391355	Screw, BITTB3X8 SZN
Q671	B0350000	IC, TA75458P
Q681	A6342200	Transistor, 2CS2878-A
Q682	A6342200	Transistor, 2CS2878-A
Q683	A6342200	Transistor, 2CS2878-A
Q684	A6342200	Transistor, 2CS2878-A
Q685	A6342200	Transistor, 2CS2878-A
Q690	23319808	IC, M5218AP
Q701	B0588213	IC, T7K64(Z)
Q703	23905014	IC, LC78816M
Q704	23905014	IC, LC78816M
Q705	23905014	IC, LC78816M
Q707	B0379550	IC, TA8667P
Q709	A6734590	Transistor, 2SC752(G)TM-Y
Q710	23314204	Transistor, 2SC2412K, Q
Q712	23905320	IC, NM24C16EN
Q713	23905320	IC, NM24C16EN
Q715	23319808	IC, M5218AP
Q717	23319808	IC, M5218AP
Q719	23319808	IC, M5218AP
Q751	23905094	IC, STR392-110
Q752	23905094	IC, STR392-110

Location No.	Part No.	Description
Q754	23904521	IC, AN7805
Q754B	70391356	Screw, BITTB3X10 SZN
Q755	23904525	IC, AN7809
Q755B	70391356	Screw, BITTB3X10 SZN
Q756	23318841	IC, AN79M09F
Q756B	70391356	Screw, BITTB3X10 SZN
Q757	A6317440	Transistor, 2SC1815-Y
Q758	A6317440	Transistor, 2SC1815-Y
Q759	A6534040	Transistor, 2SA1015-Y
Q760	23314141	Transistor, 2SC3852
Q760B	70391356	Screw, BITTB3X10 SZN
Q761	A6534040	Transistor, 2SA1015-Y
Q762	A6317440	Transistor, 2SC1815-Y
Q764	B0487045	IC, TC74HC4049AP
Q765	A6317440	Transistor, 2SC1815-Y
Q766	A6317440	Transistor, 2SC1815-Y
Q767	B0470662	IC, TC4066BP
Q768	A6534040	Transistor, 2SA1015-Y
Q769	A6317440	Transistor, 2SC1815-Y
Q770	A6534040	Transistor, 2SA1015-Y
Q771	A6533730	Transistor, 2SA1012-Y
Q771B	23035308	Screw, BTB3X8SZN
Q771C	23960136	Adhesive, TSE3843-W
Q772	A6534040	Transistor, 2SA1015-Y
Q773	A6317440	Transistor, 2SC1815-Y
Q801	23906540	IC, STR-Z4267
Q810	23906689	IC, PQ05RR11
Q810B	70391355	Screw, BITTB3X8 SZN
Q811	A6002050	Transistor, RN1205
Q812	A6317440	Transistor, 2SC1815-Y
Q821	A6002010	Transistor, RN1201
Q822	A8643112	Photo Coupler, TLP621(GRL-L
Q823	23135008	IC, STR-F6668B
Q823B	72471082	Screw, BRDT2W3X10 SZN
Q831	23319941	IC, SI-3050C
Q831B	70391356	Screw, BITTB3X10 SZN
Q832	23905976	IC, PQ05RD11
Q832B	70391356	Screw, BITTB3X10 SZN
Q833	23905977	IC, PQ09RD11
Q833B	70391356	Screw, BITTB3X10 SZN
⚠Q862	A8643112	Photo Coupler, TLP621(GRL-L
Q901	A6372621	Transistor, 2SC5360
Q902	A6317440	Transistor, 2SC1815-Y
Q911	A6372621	Transistor, 2SC5360
Q913	A6317440	Transistor, 2SC1815-Y
Q914	A6321240	Transistor, 2SC2120-Y
Q921	A6372621	Transistor, 2SC5360
Q922	A6317440	Transistor, 2SC1815-Y
Q961	A6317440	Transistor, 2SC1815-Y
Q962	A6509140	Transistor, 2SA562TM-Y
Q963	A6317440	Transistor, 2SC1815-Y
Q964	A6534040	Transistor, 2SA1015-Y
Q965	A6317440	Transistor, 2SC1815-Y
Q966	A6534040	Transistor, 2SA1015-Y
Q6101	A6317440	Transistor, 2SC1815-Y
Q8500	23905251	IC, SE024N
Q8510	A6000010	Transistor, RN1001
Q8520	A6317440	Transistor, 2SC1815-Y
Q9601	A6534040	Transistor, 2SA1015-Y
Q9602	A6534040	Transistor, 2SA1015-Y
Q9605	A6317440	Transistor, 2SC1815-Y
Q9606	A6534040	Transistor, 2SA1015-Y
QA01	23000136	IC, CXP750010-1055
QA02	23905666	IC, AT24C1610PC

Location No.	Part No.	Description
QA03	A6534040	Transistor, 2SA1015-Y
QA91	A6317440	Transistor, 2SC1815-Y
QB01	A6317440	Transistor, 2SC1815-Y
QB02	A6534040	Transistor, 2SA1015-Y
QB03	A6002050	Transistor, RN1205
QB81	A6342200	Transistor, 2CS2878-A
QB82	A6342200	Transistor, 2CS2878-A
QB83	A6534040	Transistor, 2SA1015-Y
QB92	A6317440	Transistor, 2SC1815-Y
QB93	A6534040	Transistor, 2SA1015-Y
QB94	A6534040	Transistor, 2SA1015-Y
QB95	A6534040	Transistor, 2SA1015-Y
QB96	A6534040	Transistor, 2SA1015-Y
QD89	A6317440	Transistor, 2SC1815-Y
QF01	23906822	IC, SDA5273-2S C
QF02	23314204	Transistor, 2SC2412K, Q
QF03	23314204	Transistor, 2SC2412K, Q
QF04	A6734590	Transistor, 2SC752(G)TM-Y
QF06	23314204	Transistor, 2SC2412K, Q
QF10	23906641	IC, AS4C14400
QF11	23906367	IC, PST9146NL
QQ01	B0385755	IC, TA1229N
QQ02	B0383881	IC, TA8772AN
QQ03	A6335470	Transistor, 2SC2712-Y
QQ04	A6335470	Transistor, 2SC2712-Y
QR01	23000947	IC, MB90096-186
QR01	B0386235	IC, TA1287P
QR03	23114530	Transistor, 2SA933S-Q
QR05	A6317440	Transistor, 2SC1815-Y
QR21	A6335470	Transistor, 2SC2712-Y
QR24	A6335470	Transistor, 2SC2712-Y
QR35	A6317440	Transistor, 2SC1815-Y
QR36	A6317440	Transistor, 2SC1815-Y
QR37	A6534040	Transistor, 2SA1015-Y
QR38	A6317440	Transistor, 2SC1815-Y
QR39	A6534040	Transistor, 2SA1015-Y
QR40	A6317440	Transistor, 2SC1815-Y
QR41	A6534040	Transistor, 2SA1015-Y
QS01	A6359870	Transistor, 2SC3326-B
QS02	A6359870	Transistor, 2SC3326-B
QS03	A6335470	Transistor, 2SC2712-Y
QS04	A6335470	Transistor, 2SC2712-Y
QS05	A6359870	Transistor, 2SC3326-B
QS06	A6359870	Transistor, 2SC3326-B
QS07	A6014040	Transistor, RN2404
QS08	A6359870	Transistor, 2SC3326-B
QS09	A6359870	Transistor, 2SC3326-B
QS11	A6359870	Transistor, 2SC3326-B
QS12	A6014040	Transistor, RN2404
QV01	B0385650	IC, TA1218N
QV02	A6335470	Transistor, 2SC2712-Y
QV06	A6541130	Transistor, 2SA1162-Y
QV07	A6359870	Transistor, 2SC3326-B
QV08	A6335470	Transistor, 2SC2712-Y
QV09	23114528	Transistor, 2SC1740S, Q
QV10	A6335470	Transistor, 2SC2712-Y
QV11	A6335470	Transistor, 2SC2712-Y
QV12	23114528	Transistor, 2SC1740S, Q
QV14	23114528	Transistor, 2SC1740S, Q
QV15	A6359870	Transistor, 2SC3326-B
QV800	A6317440	Transistor, 2SC1815-Y
QW06	A6317440	Transistor, 2SC1815-Y
QW07	A6734590	Transistor, 2SC752(G)TM-Y
QW09	A6317440	Transistor, 2SC1815-Y

Location No.	Part No.	Description
QW10	A6534040	Transistor, 2SA1015-Y
QW19	A6317440	Transistor, 2SC1815-Y
QW20	A6317440	Transistor, 2SC1815-Y
QW51	23314701	Transistor, 2SA1186A
QW52	23314705	Transistor, 2SD1763A
QZ01	B0410895	IC, TC90A49P
QZ02	A6335470	Transistor, 2SC2712-Y
QZ03	A6541130	Transistor, 2SA1162-Y
QZ04	A6541130	Transistor, 2SA1162-Y
QZ05	A6541130	Transistor, 2SA1162-Y
QZ06	A6541130	Transistor, 2SA1162-Y
QZ07	A6541130	Transistor, 2SA1162-Y
QZ08	A6335470	Transistor, 2SC2712-Y
D101	23316411	Diode, Zener, HZT33-12
D201	23118041	Diode, MA111-(TX)
D301	23118479	Diode, BYD33J
D302	23118479	Diode, BYD33J
D303	23115599	Diode, 1N4148
D308	23118822	Diode, ERB12-02
D309	23118822	Diode, ERB12-02
D315	23115599	Diode, 1N4148
D332	23316794	Diode, SC570A
D340	23115599	Diode, 1N4148
D341	23316675	Diode, Zener, MTZJ6.2B
D350	23115599	Diode, 1N4148
D351	23115599	Diode, 1N4148
D352	23115599	Diode, 1N4148
D353	23316672	Diode, Zener, MTZJ5.6B
D354	23115599	Diode, 1N4148
D360	23316677	Diode, Zener, MTZJ6.8A
D370	23316672	Diode, Zener, MTZJ5.6B
D371	23115599	Diode, 1N4148
D385	23115599	Diode, 1N4148
D406	A7978850	Diode, S5295G
D408	23118338	Diode, RU-4AM LF-L1
D421	23118041	Diode, MA111-(TX)
D427	23316680	Diode, Zener, MTZJ7.5A
D428	23316751	Diode, Zener, MTZJ30C
D429	23316751	Diode, Zener, MTZJ30C
D430	23316568	Diode, MA8051-M, TX
D431	23316558	Diode, HSM2836C, TL
D432	23316568	Diode, MA8051-M, TX
D441	23316688	Diode, Zener, MTZJ9.1C
D443	23118338	Diode, RU-4AM LF-L1
D444	23118338	Diode, RU-4AM LF-L1
D448	23118056	Diode, AG01
D460	A7568480	Diode, TVR1G
D461	23316582	Diode, ERC20-06
D461C	23960136	Adhesive, TSE3843-W
D462	23115599	Diode, 1N4148
D463	23115599	Diode, 1N4148
D464	23316718	Diode, Zener, MTZJ12A
D465	23316718	Diode, Zener, MTZJ12A
D467	23118479	Diode, BYD33J
D470	23115599	Diode, 1N4148
D471	A7568460	Diode, TVR-1B
D474	23316719	Diode, Zener, MTZJ12B
D481	23316726	Diode, Zener, MTZJ15C
D482	23118479	Diode, BYD33J
D483	23316720	Diode, Zener, MTZJ12C
D486	23115599	Diode, 1N4148
D487	23118479	Diode, BYD33J
D488	23115599	Diode, 1N4148
D489	23316659	Diode, Zener, MTZJ3.6B

Location No.	Part No.	Description
D601	23115599	Diode, 1N4148
D602	23115599	Diode, 1N4148
D603	23115599	Diode, 1N4148
D604	23115599	Diode, 1N4148
D611	23115599	Diode, 1N4148
D612	23115599	Diode, 1N4148
D613	23115599	Diode, 1N4148
D614	23115599	Diode, 1N4148
D621	23115599	Diode, 1N4148
D622	23115599	Diode, 1N4148
D623	23115599	Diode, 1N4148
D624	23115599	Diode, 1N4148
D625	23115599	Diode, 1N4148
D626	23115599	Diode, 1N4148
D631	23115599	Diode, 1N4148
D632	23115599	Diode, 1N4148
D633	23115599	Diode, 1N4148
D634	23115599	Diode, 1N4148
D635	23115599	Diode, 1N4148
D641	23115599	Diode, 1N4148
D642	23115599	Diode, 1N4148
D643	23115599	Diode, 1N4148
D644	23115599	Diode, 1N4148
D645	23115599	Diode, 1N4148
D646	23115599	Diode, 1N4148
D671	23316739	Diode, Zener, MTZJ22C
D701	23115537	Diode, 1SS131
D702	23115537	Diode, 1SS131
D703	23115537	Diode, 1SS131
D704	23115537	Diode, 1SS131
D801	23316962	Diode, S1WBA20 4101
D802	23357041	Diode, LN6SB60-F05
D802B	72471082	Screw, BRDT2W3X10 SZN
D803	23316718	Diode, Zener, MTZJ12A
D804	23316718	Diode, Zener, MTZJ12A
D805	23316686	Diode, Zener, MTZJ9.1A
D806	23316747	Diode, Zener, MTZJ27C
D809	23316753	Diode, Zener, MTZJ33A
D810	23316747	Diode, Zener, MTZJ27C
D811	23118057	Diode, AG01A
D812	23316688	Diode, Zener, MTZJ9.1C
D813	23118060	Diode, AL01Z
D814	23316672	Diode, Zener, MTZJ5.6B
D816	24000656	Varistor, TNR15G471K
D817	23115599	Diode, 1N4148
D818	23115599	Diode, 1N4148
D819	23115599	Diode, 1N4148
D820	23316671	Diode, Zener, MTZJ5.6A
D821	23118173	Diode, RBV-406M, LA
D821	23316718	Diode, Zener, MTZJ12A
D822	23316381	Diode, RU1P LF-C1
D822	23316662	Diode, Zener, MTZJ4.3A
D824	23118060	Diode, AL01Z
D825	23115599	Diode, 1N4148
D826	23115599	Diode, 1N4148
D827	A7271460	Diode, 1Z30A
D828	A7270200	Diode, Zener, 1Z6.2
D853	23316813	Diode, EG1
D854	23316813	Diode, EG1
D855	23357215	Diode, D4SBS6
D855B	70391355	Screw, BITTB3X8 SZN
D856	23357216	Diode, D4SBL20U
D856B	70391355	Screw, BITTB3X8 SZN
D857	23115532	Diode, ERB12-01

Location No.	Part No.	Description
D858	23115599	Diode, 1N4148
D859	23357214	Diode, D4SBS4
D859B	70391355	Screw, BITTB3X8 SZN
D860	23357217	Diode, D4SBL40
D860B	70391355	Screw, BITTB3X8 SZN
D862	23115599	Diode, 1N4148
D863	23316553	Diode, 1SS145
D866	23316184	Diode, FML-G12S
D866B	70391355	Screw, BITTB3X8 SZN
D891	23115599	Diode, 1N4148
D892	23316745	Diode, Zener, MTZJ27A
D893	23316672	Diode, Zener, MTZJ5.6B
D901	23115599	Diode, 1N4148
D902	23115599	Diode, 1N4148
D903	23115599	Diode, 1N4148
D911	23115599	Diode, 1N4148
D912	23115599	Diode, 1N4148
D913	23115599	Diode, 1N4148
D914	23115599	Diode, 1N4148
D915	23115599	Diode, 1N4148
D921	23115599	Diode, 1N4148
D922	23115599	Diode, 1N4148
D924	23115599	Diode, 1N4148
D925	23115599	Diode, 1N4148
D926	23115599	Diode, 1N4148
D965	23115599	Diode, 1N4148
D966	23115599	Diode, 1N4148
D7701	23115599	Diode, 1N4148
D7702	23115532	Diode, ERB12-01
D7703	23316751	Diode, Zener, MTZJ30C
D7705	23115599	Diode, 1N4148
D7706	23115599	Diode, 1N4148
D7707	23115599	Diode, 1N4148
D7708	23115599	Diode, 1N4148
D7709	23316675	Diode, Zener, MTZJ6.2B
D7710	23316716	Diode, Zener, MTZJ11B
D7711	23316716	Diode, Zener, MTZJ11B
D7717	23316675	Diode, Zener, MTZJ6.2B
D7718	23316675	Diode, Zener, MTZJ6.2B
D7719	23316675	Diode, Zener, MTZJ6.2B
D7720	23316675	Diode, Zener, MTZJ6.2B
D7721	23316675	Diode, Zener, MTZJ6.2B
D7722	23316675	Diode, Zener, MTZJ6.2B
D7723	23115599	Diode, 1N4148
D7724	23115599	Diode, 1N4148
D7725	23115599	Diode, 1N4148
D8040	23115599	Diode, 1N4148
D8301	23115532	Diode, ERB12-01
D8302	23115532	Diode, ERB12-01
D8303	23115532	Diode, ERB12-01
D8510	23316718	Diode, Zener, MTZJ12A
D8520	23316718	Diode, Zener, MTZJ12A
D8530	23316672	Diode, Zener, MTZJ5.6B
D8540	23115599	Diode, 1N4148
D8550	23115599	Diode, 1N4148
D8560	23316653	Diode, Zener, MTZJ2.7B
D8570	23316749	Diode, Zener, MTZJ30A
D8580	23316761	Diode, Zener, MTZJ39A
DA01	23115599	Diode, 1N4148
DA43	23115599	Diode, 1N4148
DA44	23115599	Diode, 1N4148
DA45	23115599	Diode, 1N4148
DA46	23115599	Diode, 1N4148
DA420	23115599	Diode, 1N4148

Location No.	Part No.	Description
DB01	23358505	Diode (LED), SLR56VC196F
DB02	23358503	Diode (LED), SCL003MC3FX
DB03	23358522	LED, SIR-56SB3F
DF01	23316654	Diode, Zener, MTZJ3.0A
DF02	23115599	Diode, 1N4148
DF08	23316671	Diode, Zener, MTZJ5.6A
DF09	23316671	Diode, Zener, MTZJ5.6A
DR01	23115599	Diode, 1N4148
DR02	23115599	Diode, 1N4148
DR02	23316557	Diode, HSM221C, TL
DR03	23115599	Diode, 1N4148
DR03	23118351	Diode, Zener, RD4.7M-T1BB2
DR61	23115599	Diode, 1N4148
DR62	23115599	Diode, 1N4148
DR63	23115599	Diode, 1N4148
DV01	23118296	Diode, Zener, RD9.1M-T1BB2
DV02	23118296	Diode, Zener, RD9.1M-T1BB2
DV03	23118296	Diode, Zener, RD9.1M-T1BB2
DV04	23118296	Diode, Zener, RD9.1M-T1BB2
DV05	23118296	Diode, Zener, RD9.1M-T1BB2
DV06	23118296	Diode, Zener, RD9.1M-T1BB2
DV07	23118296	Diode, Zener, RD9.1M-T1BB2
DV10	23316557	Diode, HSM221C, TL
DV11	23316557	Diode, HSM221C, TL
DV12	23118296	Diode, Zener, RD9.1M-T1BB2
DV14	23118296	Diode, Zener, RD9.1M-T1BB2
DV21	23316557	Diode, HSM221C, TL
DW04	23115599	Diode, 1N4148
DW05	23115599	Diode, 1N4148
DW21	23115599	Diode, 1N4148

MISCELLANEOUS

Location No.	Part No.	Description
B150B	23037312	Screw, BTBW 3X12 SZN
B224	23035412	Screw, BTB 4X12 SZN
B230	23037312	Screw, BTBW 3X12 SZN
B233	23035412	Screw, BTB 4X12 SZN
B234	23037312	Screw, BTBW 3X12 SZN
B239	23035412	Screw, BTB 4X12 SZN
B303	23037312	Screw, BTBW 3X12 SZN
B330	23037312	Screw, BTBW 3X12 SZN
B332	23037312	Screw, BTBW 3X12 SZN
B337	23035412	Screw, BTB 4X12 SZN
BB11A	23903022	Socket, 8P
BB11B	23903022	Socket, 8P
BB11C	23368627	Plug, 8P
BB12A	23903022	Socket, 8P
BB12B	23903022	Socket, 8P
BB12C	23368627	Plug, 8P
BB13A	23903022	Socket, 8P
BB13B	23903022	Socket, 8P
BB13C	23368627	Plug, 8P
BB21A	23903022	Socket, 8P
BB21B	23903022	Socket, 8P
BB21C	23368627	Plug, 8P
BB22A	23903022	Socket, 8P
BB22B	23903022	Socket, 8P
BB22C	23368627	Plug, 8P
E921	23964147	Coolant EG/G
E951	23964147	Coolant EG/G
E981	23964147	Coolant EG/G
⚠F801	23144507	Fuse, 3.15A, 250V
F801A	23165433	Holder, Fuse
F801B	23165433	Holder, Fuse
⚠F803	23144874	Fuse, 0.8A, 250V
F803A	23165433	Holder, Fuse
F803B	23165433	Holder, Fuse
⚠F860	23144869	Fuse, 2.5A, 250V
F860A	23165433	Holder, Fuse
F860B	23165433	Holder, Fuse
⚠F870	23144867	Fuse, 4.0A, 250V
F870A	23165433	Holder, Fuse
F870B	23165433	Holder, Fuse
G005	23115599	Diode, 1N4148
G023	24327180	MF, 18 ohm, ±1%, 1/4W
G510	23289479	Coil, Peaking, TRF44R7AF
G527	24567104	PF, 0.1μF
G528	24567104	PF, 0.1μF
G529	24567104	PF, 0.1μF
GJ02	24000824	Chip Jumper, 2125Type
GJ04	24000824	Chip Jumper, 2125Type
GJ05	24000824	Chip Jumper, 2125Type
GJ06	24000824	Chip Jumper, 2125Type
GJ08	24000824	Chip Jumper, 2125Type
GJ08	24000824	Chip Jumper, 2125Type
GJ09	24000824	Chip Jumper, 2125Type
GJ09	24000824	Chip Jumper, 2125Type
GJ26	24000824	Chip Jumper, 2125Type
GJ27	24000824	Chip Jumper, 2125Type
GJ28	24000824	Chip Jumper, 2125Type
GJ61	24000824	Chip Jumper, 2125Type
GJ62	24000824	Chip Jumper, 2125Type
GJ72	24000824	Chip Jumper, 2125Type
GJ73	24000824	Chip Jumper, 2125Type
GJ78	24000824	Chip Jumper, 2125Type
GJ79	24000824	Chip Jumper, 2125Type
GJ80	24000824	Chip Jumper, 2125Type
GJ81	24000824	Chip Jumper, 2125Type
GS01	24000824	Chip Jumper, 2125Type
GV05	23103832	Chip (Ferrite Bead), TEM2125M
GV07	24000824	Chip Jumper, 2125Type
GV08	24000824	Chip Jumper, 2125Type
GV11	24000824	Chip Jumper, 2125Type
GV13	24872681	Chip, 680 ohm, 1/16W
GV14	24000824	Chip Jumper, 2125Type
GV15	24000824	Chip Jumper, 2125Type
GV17	24000824	Chip Jumper, 2125Type
GV38	24000824	Chip Jumper, 2125Type
GV39	24000824	Chip Jumper, 2125Type
GV40	24000824	Chip Jumper, 2125Type
GV41	24872102	Chip, 1k ohm, 1/16W
GV97	24872101	Chip, 100 ohm, 1/16W
H002	23148355	Module, MPSA11, MPX APRO AC3
J301A	23960136	Adhesive, TSE3843-W
J302A	23960136	Adhesive, TSE3843-W
KB01	23904946	Remote Sensor, RPM-676CBR-S
P004	23161702	Terminal, 8P
P301	23902863	Socket, B-B, 20P
P350	23368520	Plug, B-B, 20P
P507	23902655	Socket, B-B, 15P
P661	23365444	Jack, Earphone
P701	23368520	Plug, B-B, 20P
P702	23368520	Plug, B-B, 20P
P708	23902863	Socket, B-B, 20P
P709	23902863	Socket, B-B, 20P
P713	23164787	Plug, 7P

Location No.	Part No.	Description
P714	23164787	Plug, 7P
P715	23164787	Plug, 7P
P720	23164786	Plug, 6P
P801	23372012	Power Cord
P802	23164965	Plug, 4P
P8020	23164965	Plug, 4P
PA01A	23903025	Socket, 25P
PA01B	23368634	Plug, 25P
PA02A	23903025	Socket, 25P
PA02B	23368634	Plug, 25P
PD04	23364092	Jack, Pin(Orange)
PD05	A5812240	Optic Receiver, TORX176
PF01A	23367724	Plug, B-B,15P
PH01	23902604	Socket, 21P
PH02	23902604	Socket, 21P
PH03	23902604	Socket, 21P
PU01	23368634	Plug, 25P
PU01A	23903025	Socket, 25P
PU02	23368634	Plug, 25P
PU02A	23903025	Socket, 25P
PV10A	23902863	Socket, B-B, 20P
PV10B	23368520	Plug, B-B, 20P
PV11A	23902863	Socket, B-B, 20P
PV11B	23368520	Plug, B-B, 20P
S601	23344367	Switch, Slide, 6C2P
S602	23145412	Switch, Slide, 2C2P
⚠S801	23145434	Switch Power, 2C2P
SA01	23145226	Switch, Push, 1C1P
SA02	23145226	Switch, Push, 1C1P
SA03	23145226	Switch, Push, 1C1P
SA04	23145226	Switch, Push, 1C1P
SA06	23145226	Switch, Push, 1C1P
SA07	23145226	Switch, Push, 1C1P
⚠SR80	23146572	Relay, DG5D1-O(M)-2
⚠SR81	23146572	Relay, DG5D1-O(M)-2
SR800	23146572	Relay, DG5D1-O(M)-2
⚠V901A	23902019	Socket, CRT, 10P
⚠V902A	23902019	Socket, CRT, 10P
⚠V903A	23902019	Socket, CRT, 10P
W661	23151232	Speaker, SPK-1235, 160X160mm, 8 ohm
W662	23151232	Speaker, SPK-1235, 160X160mm, 8 ohm
X401	23153721	Ceramic Resonator, 503kHz, TCR1023
X501	23153961	Crystal, 3.58MHz
X503	23153979	Crystal, 4.43MHz
XA01	23153497	Ceramic Resonator, 40MHz, TCR1080A
XF01	23153421	Crystal, 20.48MHz
XQ01	23153969	Crystal, 4.00MHz
XV01	23107519	Ceramic Video Trap, 4.43MHz, TCF1066
⚠Z410	23110842	Focus Pack, TPA6031
Z410A	23505177	Focus Cable
⚠Z450	24082877	CR Block, TPA5007
Z450A	23504953	Anode Cable
Z470	23110843	Focus Pack, TPA6032AH
Z702	23103800	Filter, TEM2026D
Z703	23103800	Filter, TEM2026D
Z704	23103800	Filter, TEM2026D
Z705	23103800	Filter, TEM2026D
Z706	23103800	Filter, TEM2026D
Z707	23103800	Filter, TEM2026D

Location No.	Part No.	Description
Z711	23103800	Filter, TEM2026D
Z712	23103800	Filter, TEM2026D
Z801	23905010	IC, HIC1019
Z802	23144609	Protector, PRF5000PRT, DC60V, 5.0A
⚠Z853	23144608	Protector, PRF40005PRT, DC60V, 4.0A
⚠Z854	23144608	Protector, PRF40005PRT, DC60V, 4.0A
⚠Z856	23144605	Protector, PRF40005PRT, DC60V, 2.0A
ZC01	23107626	Filter, TEM1022

PC BOARD ASSEMBLIES

* U901A	23783397	CRT-D R Board, PB8764B-1
* U901B	23783398	CRT-D G Board, PB8764B-2
* U901C	23783399	CRT-D B Board, PB8764B-3
* U901D	23783400	SVM Board , PB8764B-4
* U902A	23783401	Signal Board, PB8766C
* U903A	23783402	MICRO Board, PB8767C-1
* U903B	23783403	DPC Board, PB8767C-2
* U904	23783404	DEF Board, PB8776B
* U905	23783166	PWU Board, PB8768A
* U906A	23783184	TEXT Board, PB7928A
* U907	23783405	D-CONVER P Board, PB6601B
* U908	23783406	Power Board, PB8772B
* U909	23783171	CONVER Board, PB8773A
* U910	23783407	BACK-T Board, PB8774B
* U911A	23783411	AUDIO/POW2 Board, PB8917A-1
* U911B	23783412	FRONT CONT Board, PB8917A-2
* U911C	23783413	FRONT IN Board, PB8917A-3
* U911D	23783414	RMT IN Board, PB8917A-4
* U912	23783415	DIGI-IN Board, PB8834B

PICTURE TUBE

⚠V911R	23588486	Projection Tube Ass'y (R)
⚠V912B	23588487	Projection Tube Ass'y (G)
⚠V912G	23588488	Projection Tube Ass'y (B)

TUNER

H001	23321344	Tuner, EGA22LWX1

ACCESSORIES

K902	23306324	Remote Hand Unit, CT-90003
AT03	23588265	Battery Cover
Y101	23563686	Owner'S Manual, English, 50PJ98B

CABINET PARTS

A001	23411200	Wood Cabinet
A102	23527093	Speaker Grille R
A103	23527095	Speaker Grille L
A126	23445281	Button, Catch Male
A127	23445281	Button, Catch Male
A150	23411203	Light Box Cabinet
A160	23802013	Caster
A175	23421928	Piece, Bezel Hanging
A213	23427703	Door
A224	23445308	Button, Control

Location No.	Part No.	Description
A225	23445309	Button, Power
A322	23445282	Button, Catch Female
A410	23550607	Label, Model No.
⚠A424	23549488	Back Board
A501	23035412	Screw, BTB4X12SZN
A505	72471068	Screw, BIDT2 4X12BZ
A514	23030815	Screw, PTD #6 X 3/4
A518	23030815	Screw, PTD #6 X 3/4
A519	23030815	Screw, PTD #6 X 3/4
A521	23030815	Screw, PTD #6 X 3/4
A533	23030815	Screw, PTD #6 X 3/4
A535	23030815	Screw, PTD #6 X 3/4
A539	23030815	Screw, PTD #6 X 3/4
A541	23030815	Screw, PTD #6 X 3/4
A543	72471068	Screw, BIDT2 4X12BZ
A544	23030815	Screw, PTD #6 X 3/4
A701	23525277	Case
A703	23935910	Packing, Top
A708	23935912	Packing, Bottom
A721	23541008	Bag
A726	23845450	Joint
K101	23430111	Delta, 77-A/B Assembly
K103	23430111	Delta, 77-A/B Assembly
K501	23430607	Lenti Sheet, SCREEN50KJ-L
K502	23430608	Fresnel Sheet, SCREEN50KH-F
K601	23430509	Mirror, 50H

Location No.	Part No.	Description

SIGNAL BOARD PB8766C

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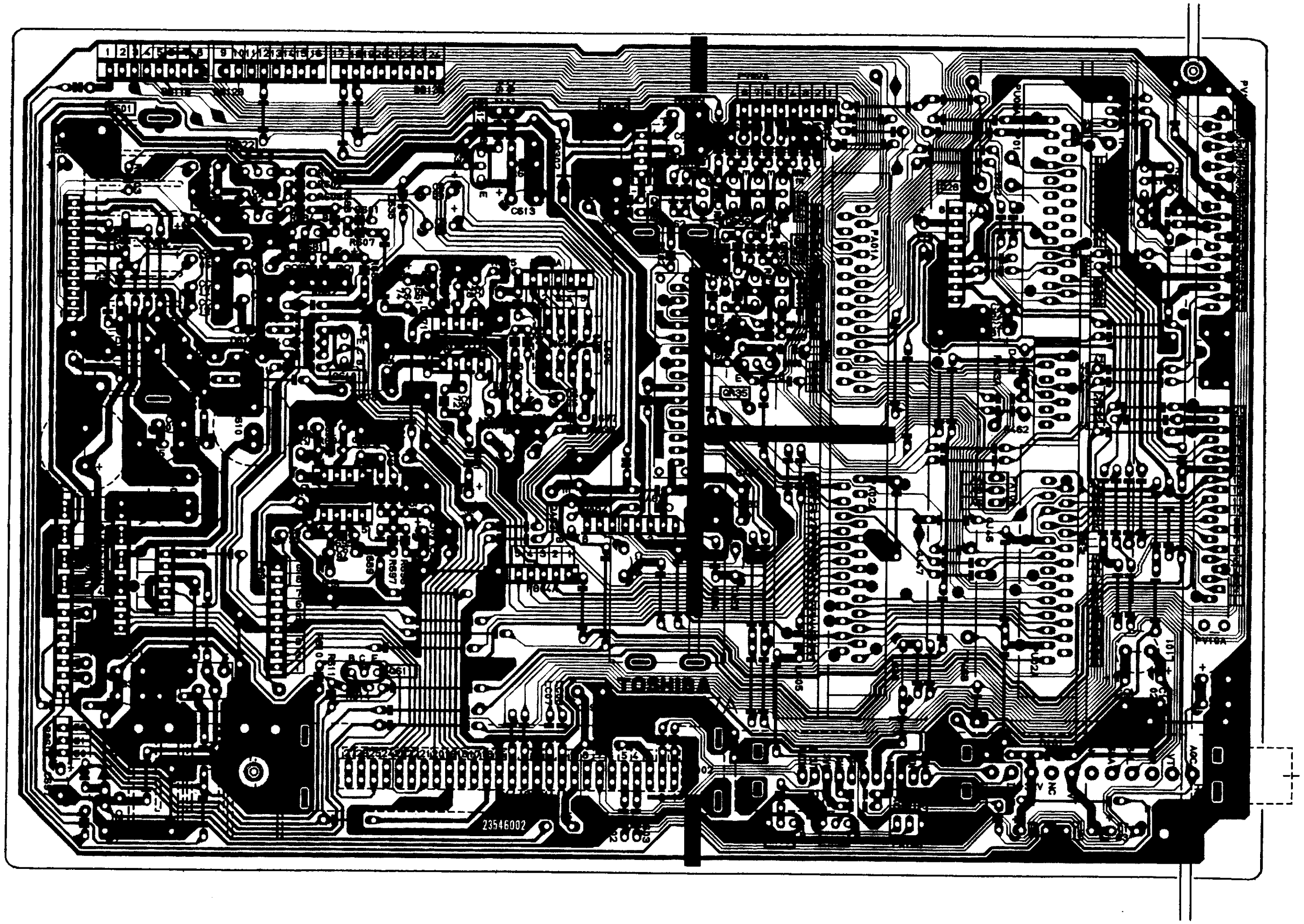
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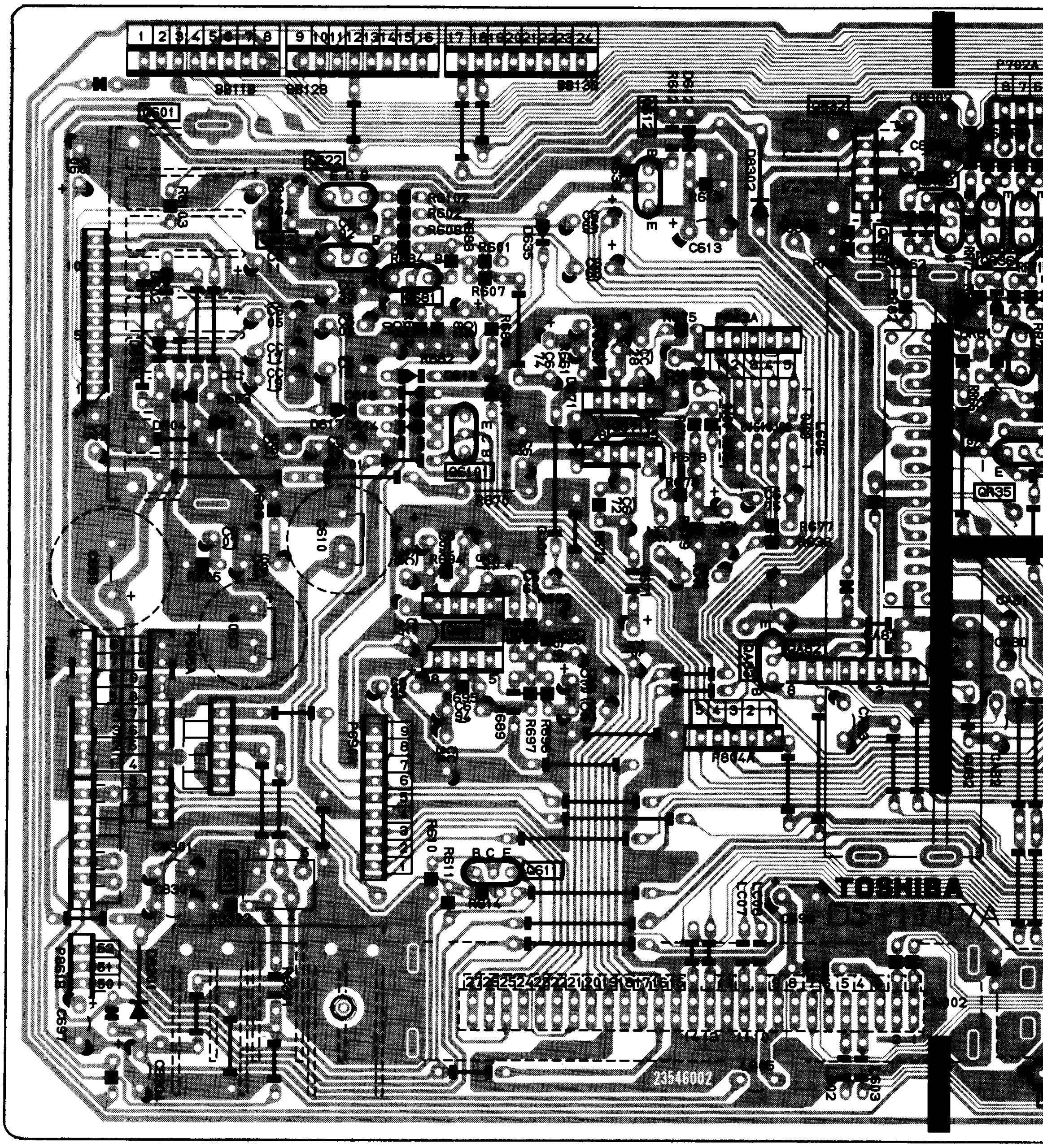
SIGNAL BOARD PB876

BOTTOM (FOIL) SIDE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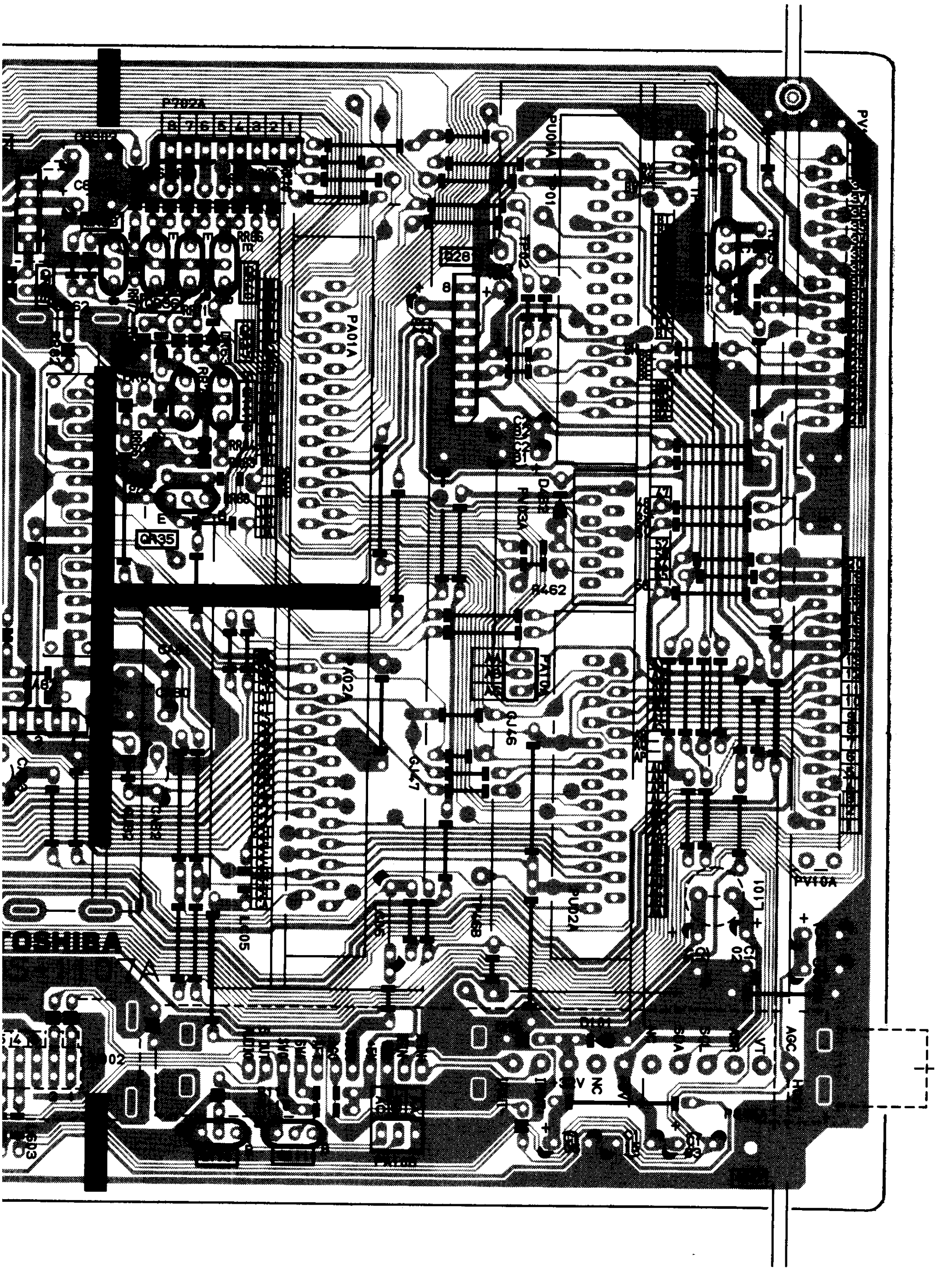
ARD PB8766C

(FOIL) SIDE



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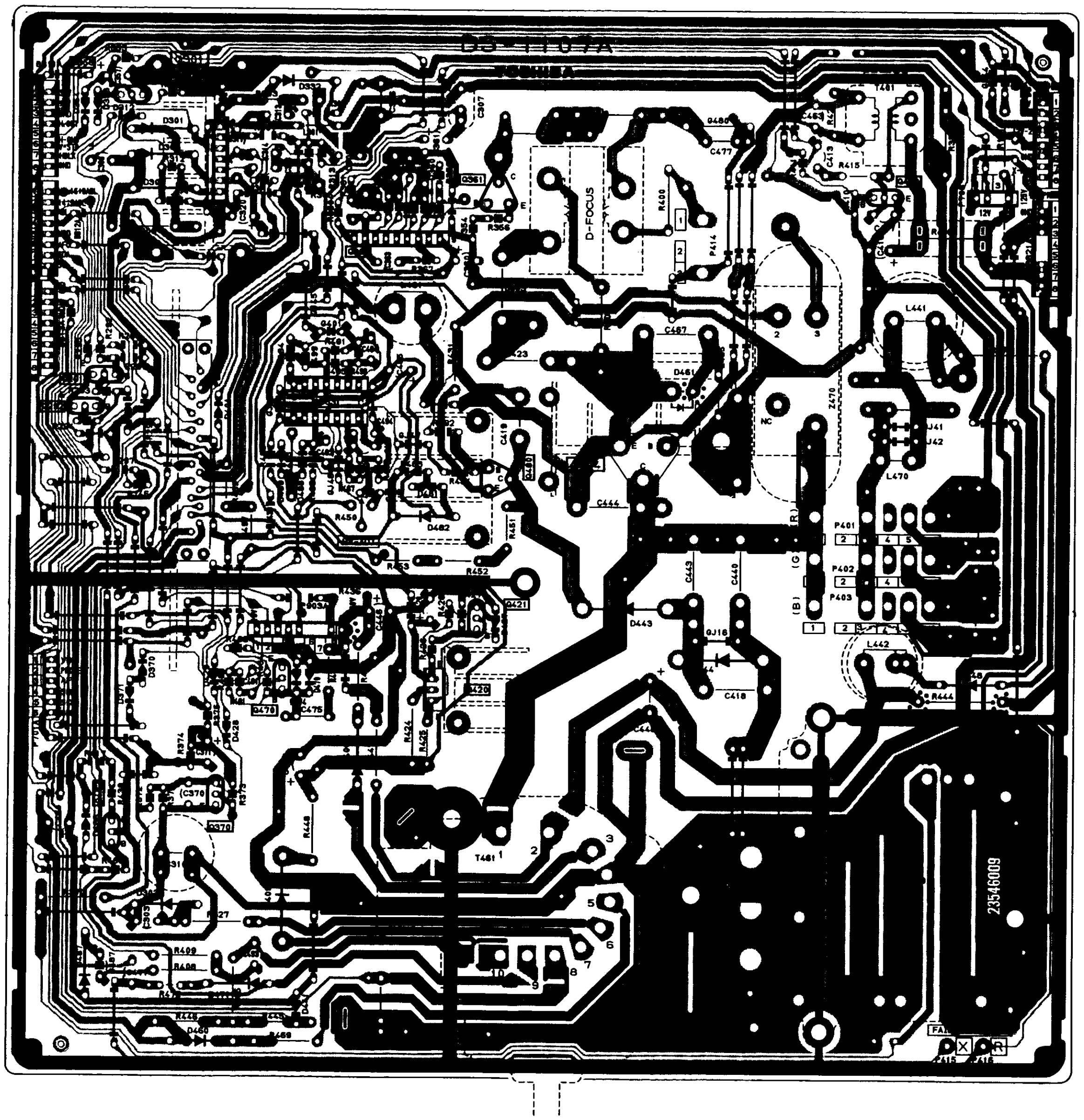
VT
TOSHIBA

DEF BOARD PB8776B

BOTTOM (FOIL) SIDE



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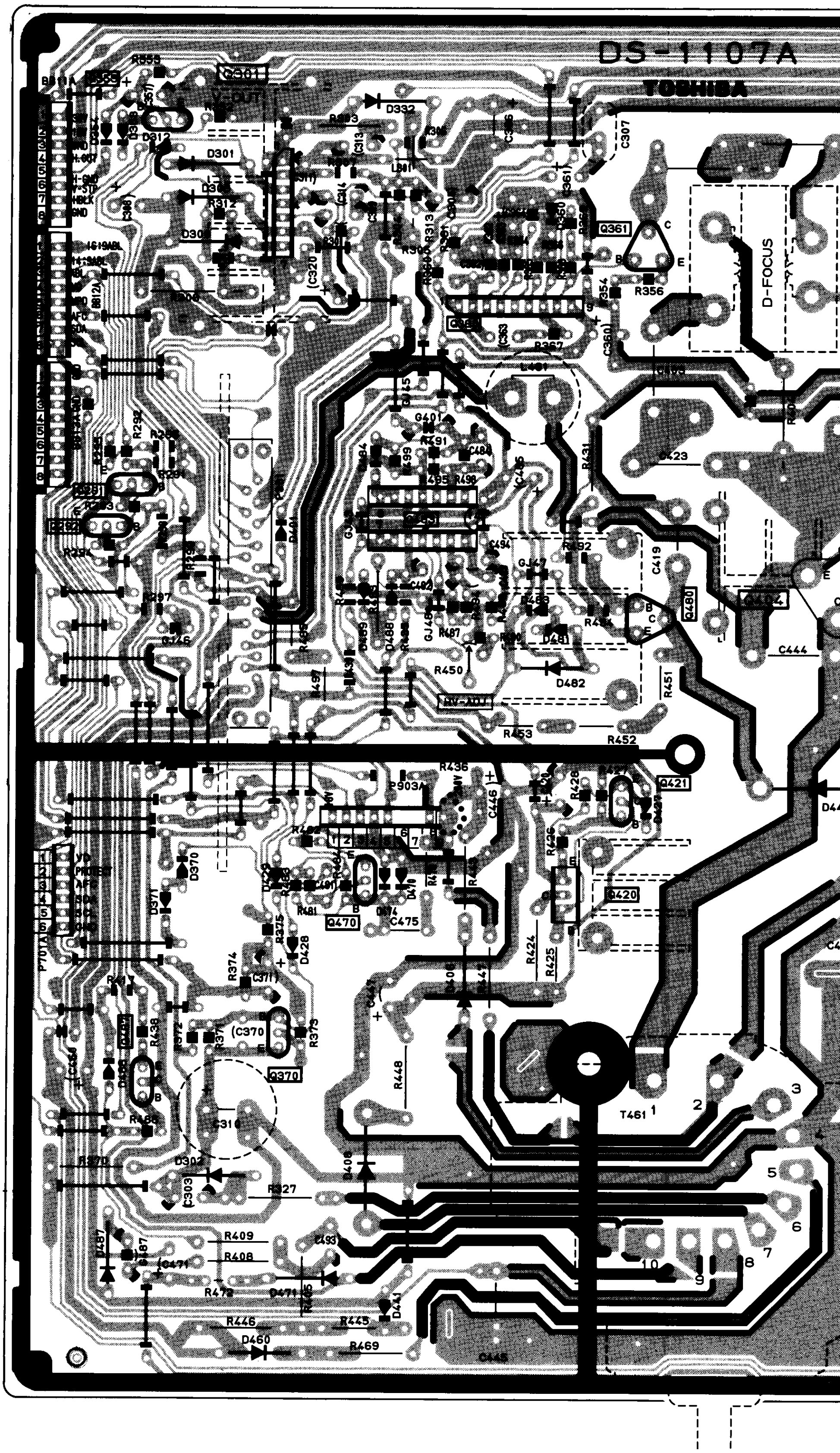
DEF BOARD PB877

BOTTOM (FOIL) SIDE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R453
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R436
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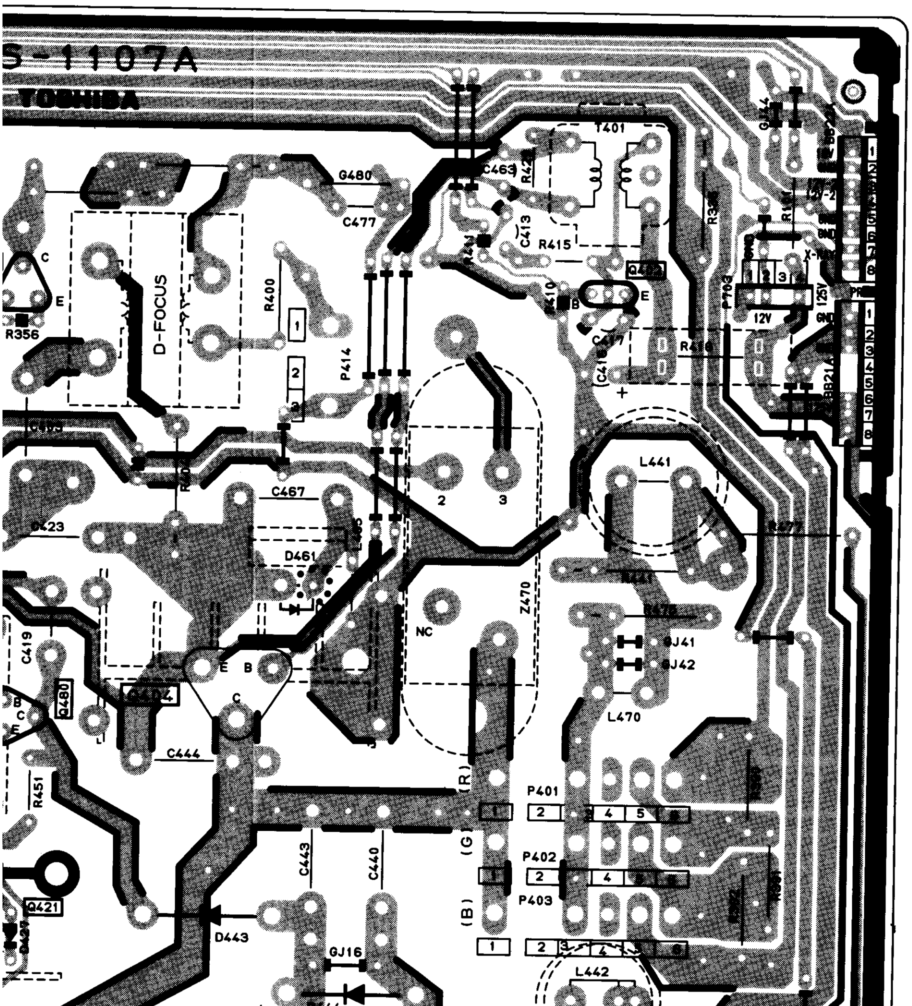
OARD PB8776B

TTOM (FOIL) SIDE



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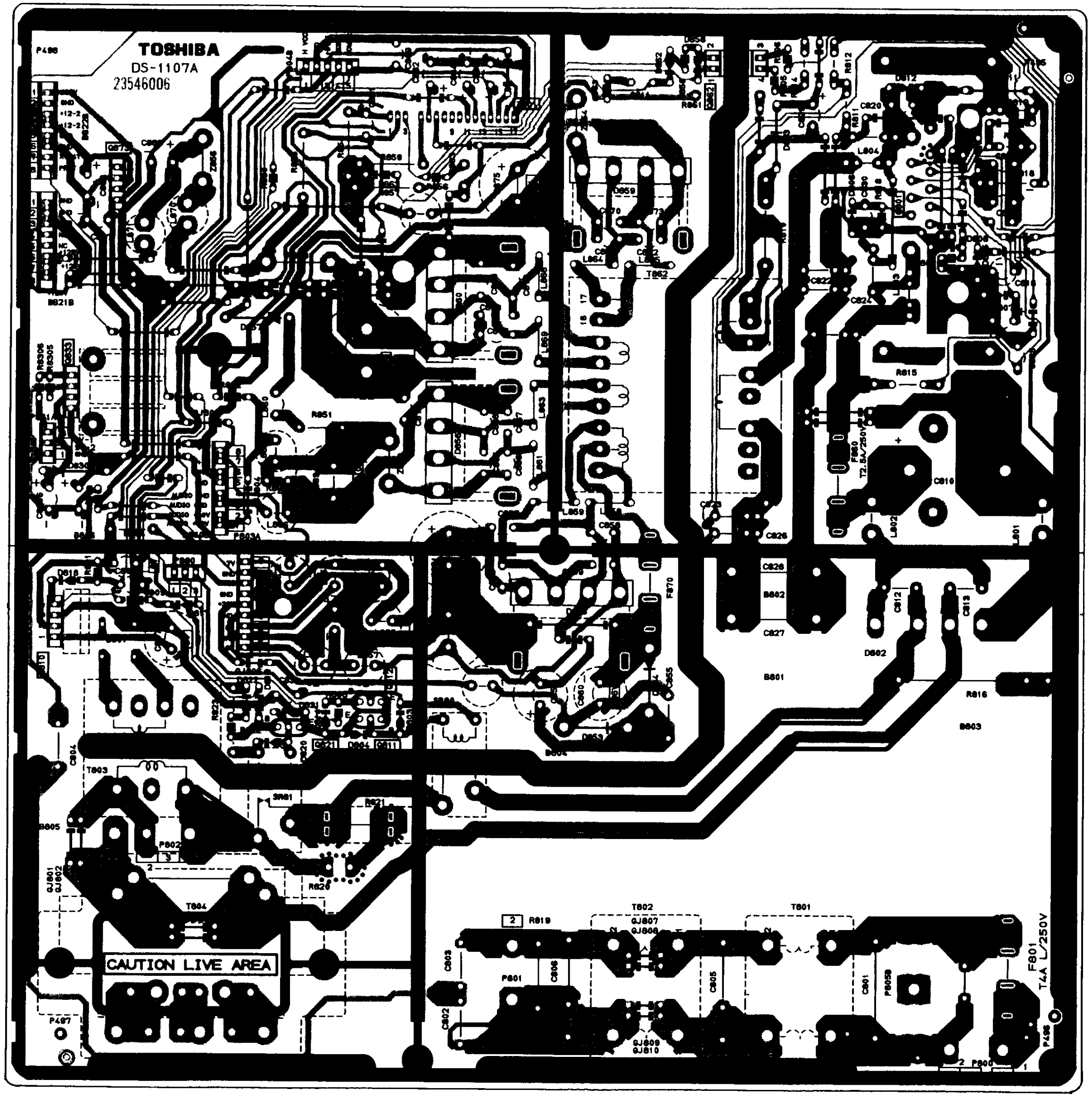
POWER BOARD PB8772B

BOTTOM (FOIL) SIDE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B801
R816
B803
R815
F860
T2.5A/250V
C810
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L801
L804
C820
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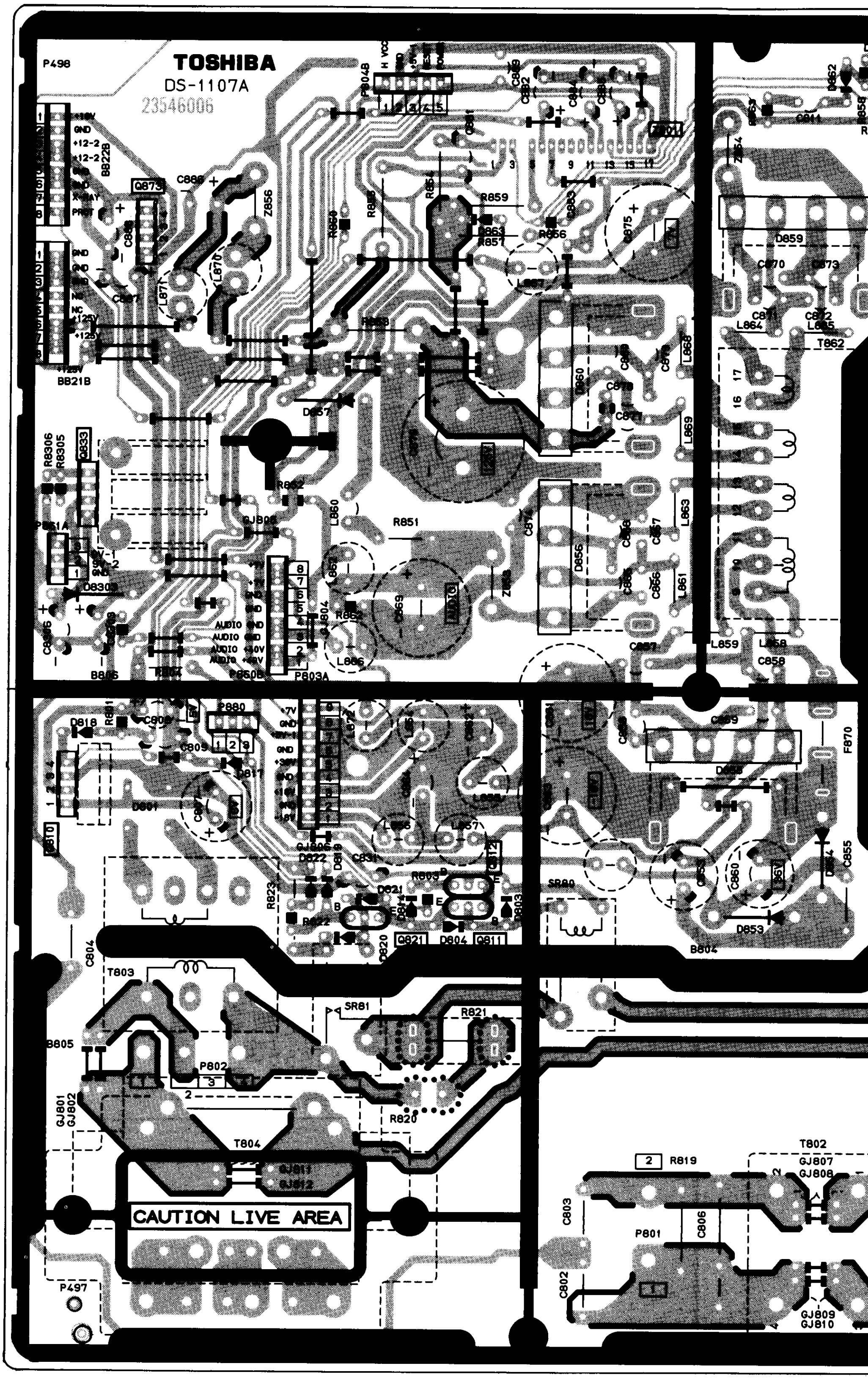
POWER BOARD PB8772

BOTTOM (FOIL) SIDE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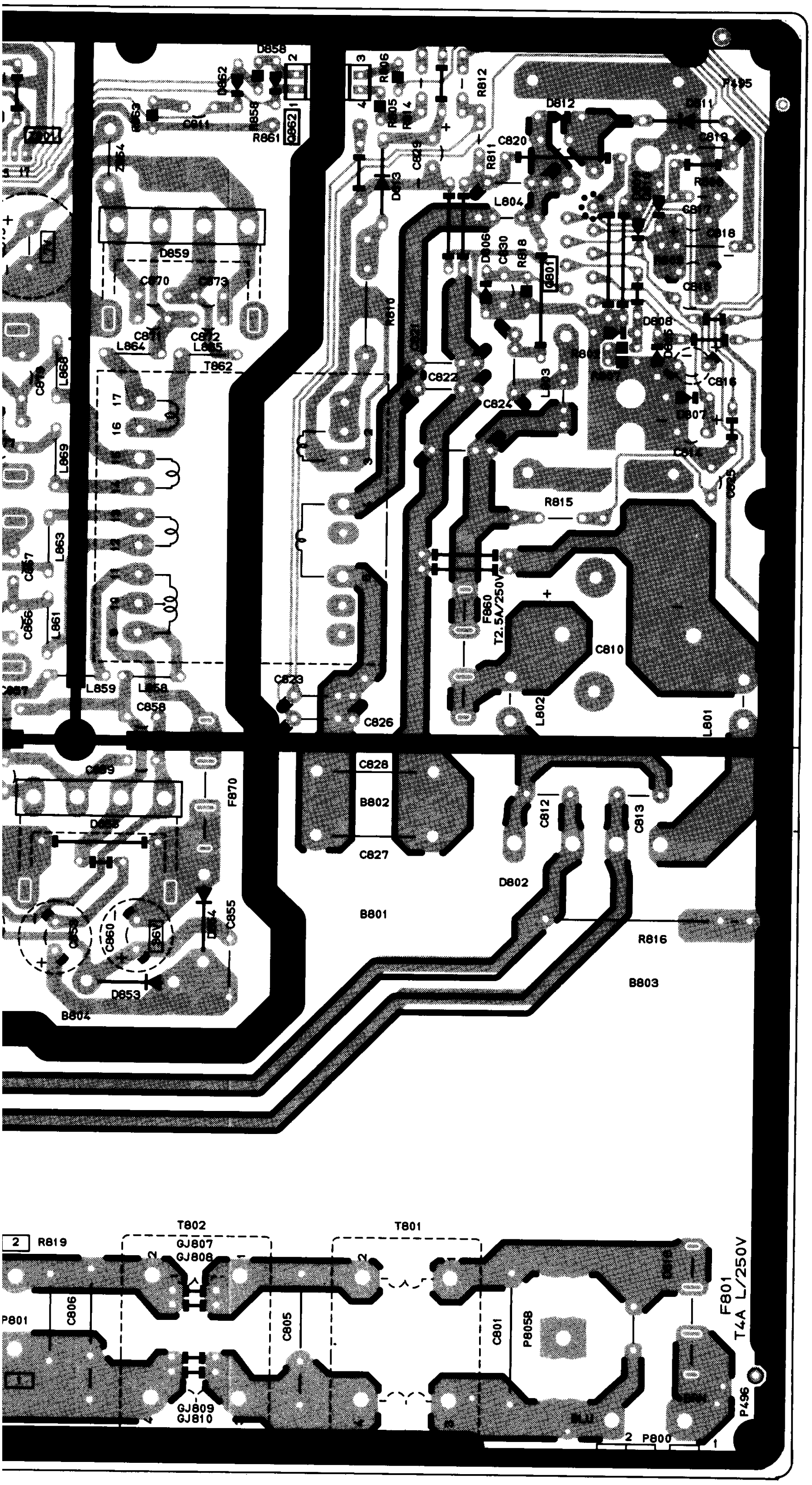
L869
R862
GJB03
L860
R851
C869
L857
D856
C874
L863
L861
R8306
R8305
Q833
P851A
D830
P850B
P803A
L866
L859
L858
C858
C857
D818
P880
C805
C807
Q811
D801
F870
D855
C860
C855
D853
B804
GJ806
D822
R823
D821
R822
Q821
D804
Q811
R803
SR80
C804
T803
SR81
R821
B805
P802
R820
GJ801
GJ802
T804
GJ811
GJ812
CAUTION LIVE AREA
P497
T802
R819
GJ807
GJ808
C803
C806
P801
C802
GJ809
GJ810

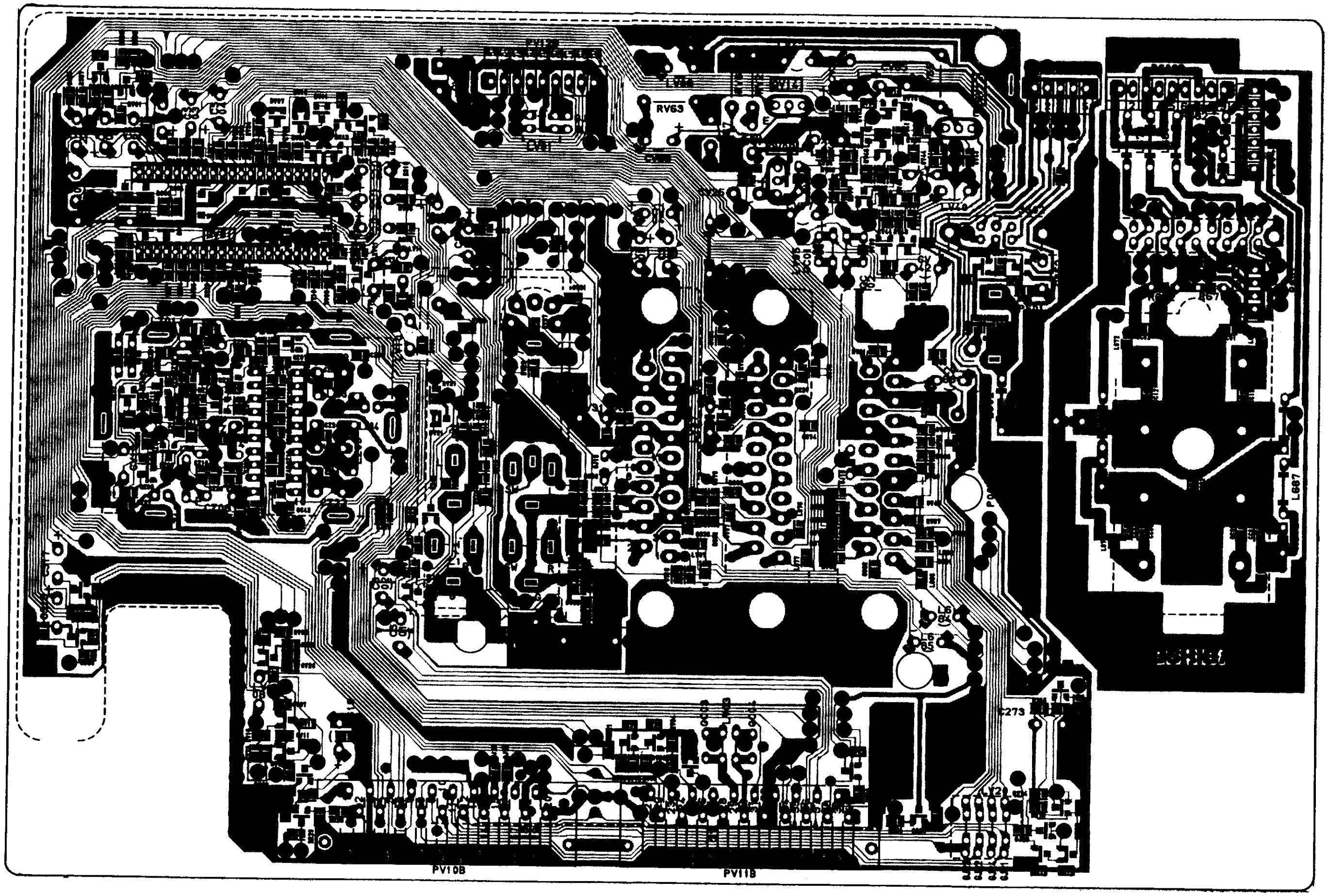
BOARD PB8772B

TOM (FOIL) SIDE


D858
D862
R858
R861
C861
C862
C863
Z854
D859
C870
C873
C871
C872
L864
L865
T862
L866
L869
L863
L861
C857
C866
L859
L858
C858
C859
F870
D855
C855
C860
D853
B804
R806
R805
R812
R811
C819
C820
D813
D812
D811
C819
L804
D806
C830
R818
C801
R810
C822
C824
R815
D808
C816
D807
C814
F495
F860
T2.5A/250V
C810
L802
L801
C823
C826
C828
B802
C827
C812
C813
D802
B801
R816
B803
R819
T802
GJ807
GJ808
GJ809
GJ810
T801
P801
C806
C805
C801
P8058
F801
T4A L/250V
P496
P800

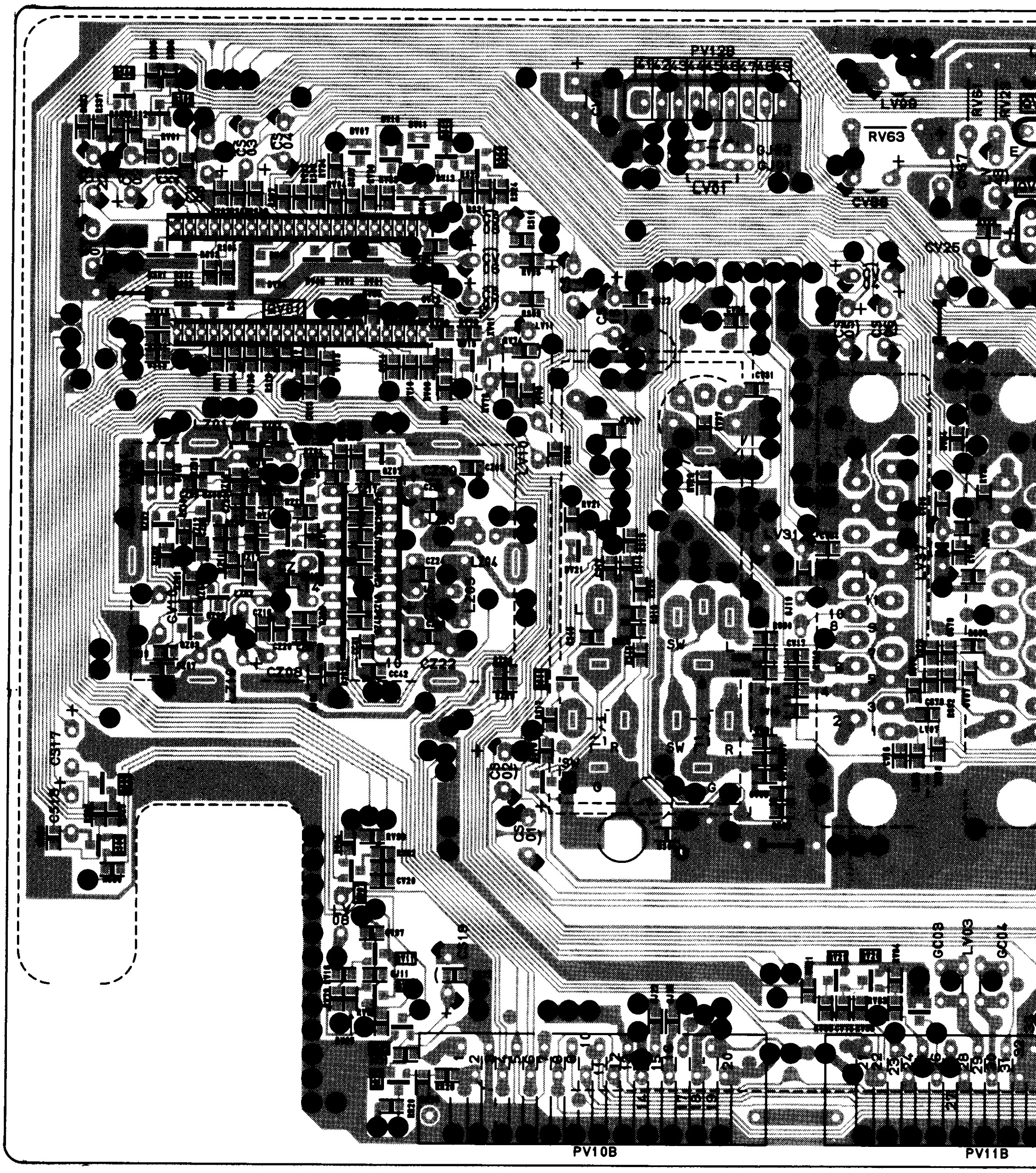
BACK/T BOARD PB8774B

BOTTOM (FOIL) SIDE


RV63
C273
L667
PV10B
PV11B

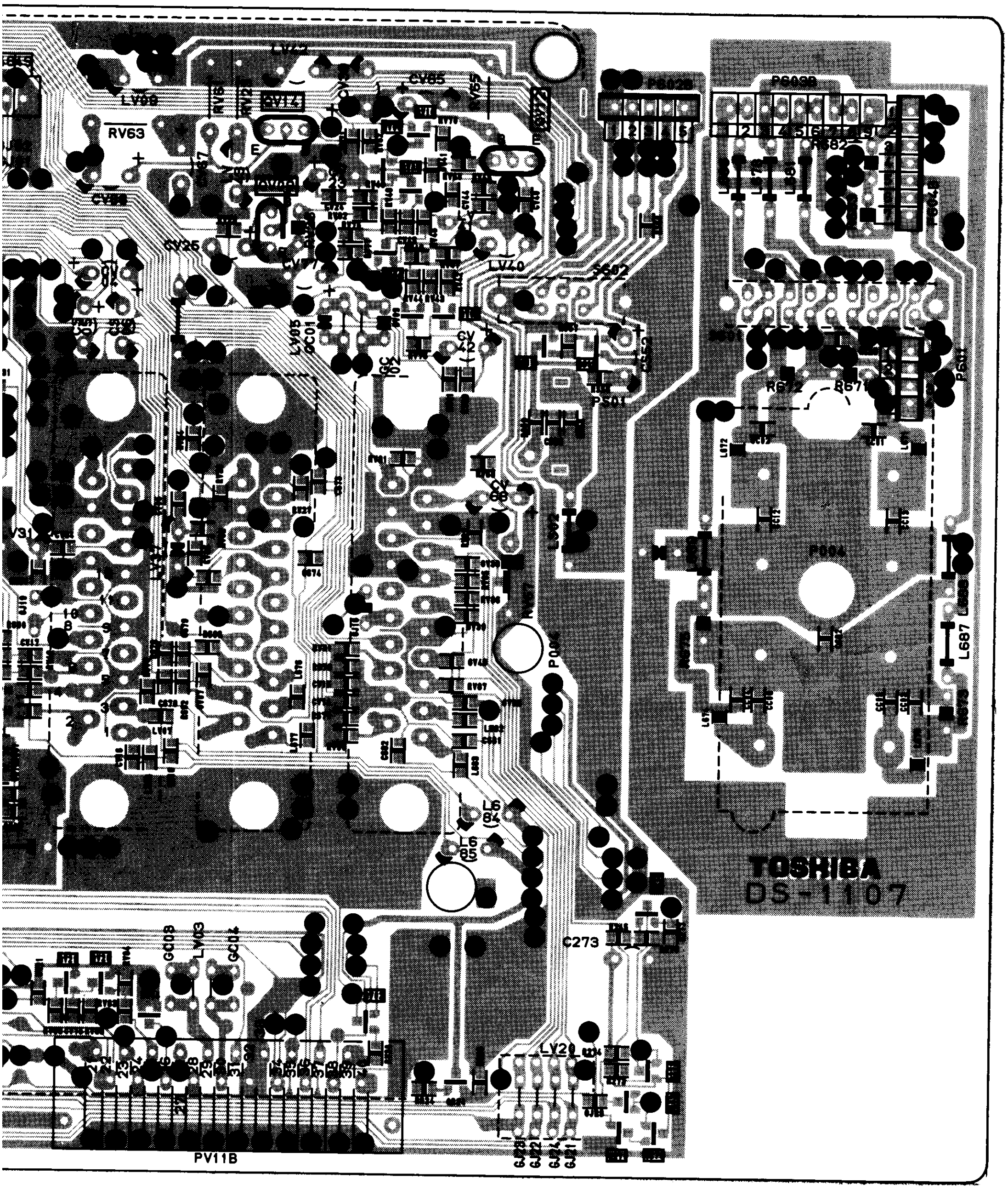
BACK/T BOARD PB87

BOTTOM (FOIL) SIDE


PV12B
LV98
RV63
LV81
CV25
V31
CZ08
CZ22
C517
GC03
LV03
GC04
PV10B
PV11B

T BOARD PB8774B

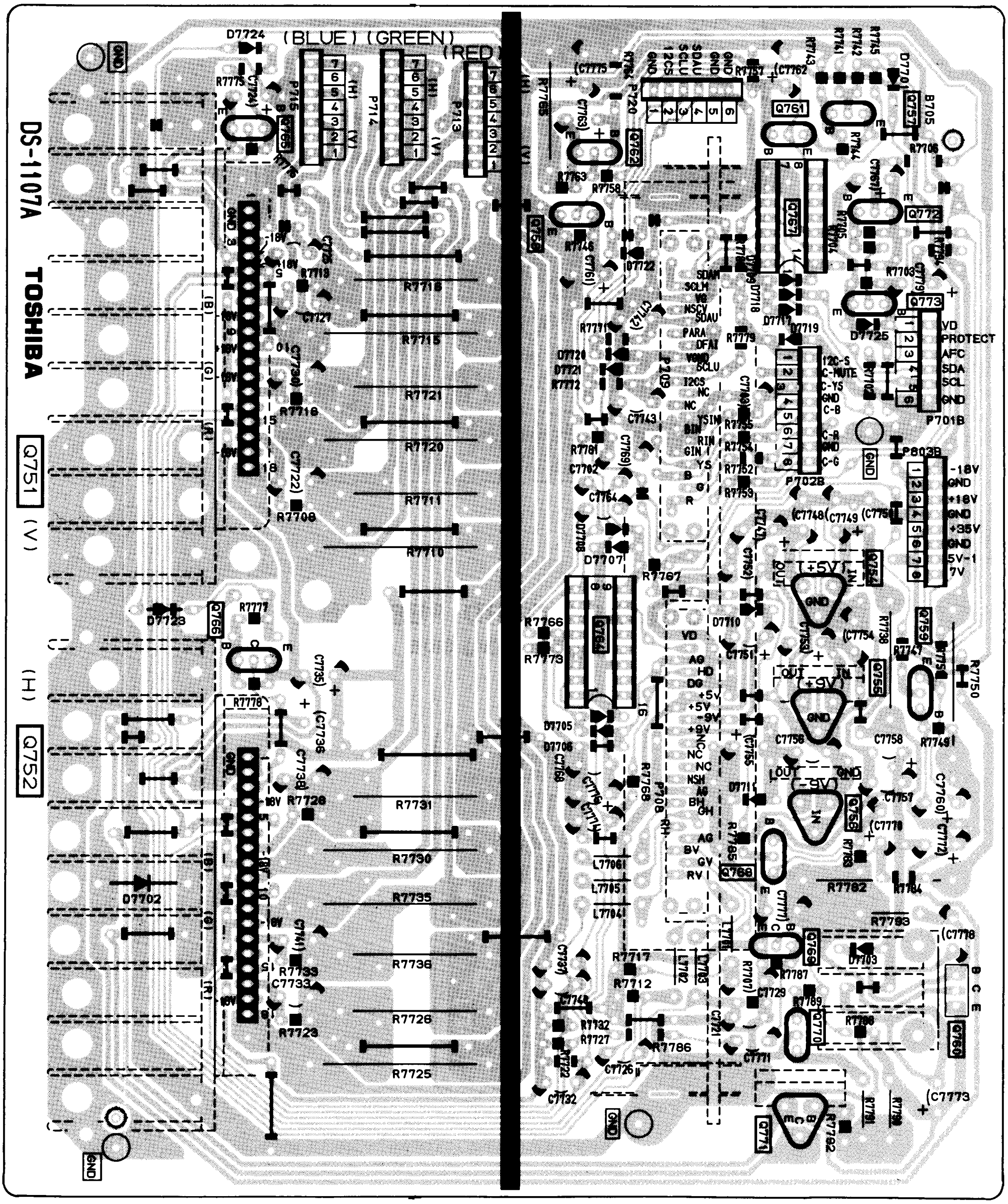
BOTTOM (FOIL) SIDE



LV22
CV85
RV63
LV99
CV98
CV25
LV40
S602
PS01
P602B
P603B
R672
R671
P604
L687
L685
TOSHIBA
DS-1107
C273
LV20
PV11B
L6 84
L6 85
GC03
GC04
LV85
GC01
CV 42
GC 02

CONVER BOARD PB8773A

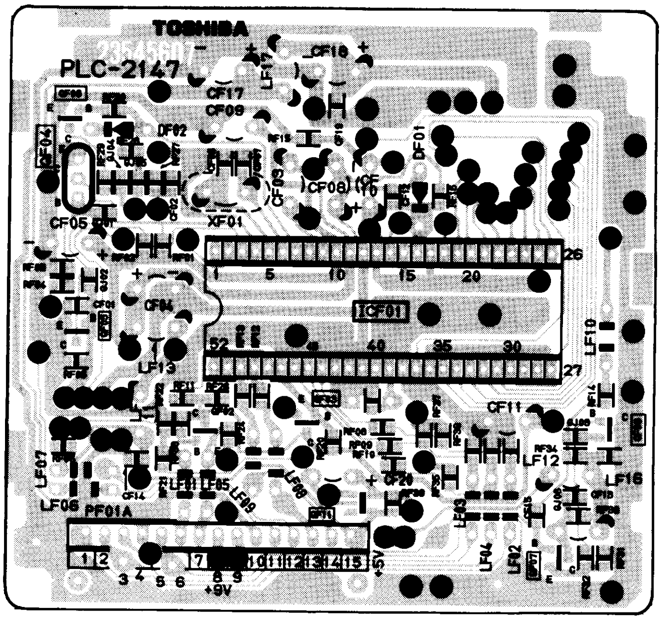
BOTTOM (FOIL) SIDE



DS-1107A
TOSHIBA
Q751
(V)
(H)
Q752
(BLUE)
(GREEN)
(RED)
P715
P714
P713
D7724
R7775
C7724
Q765
R7776
R7718
C7727
R7716
C7730
C7722
R7708
R7715
R7721
R7720
R7711
R7710
D7723
Q766
R7777
C7735
R7778
C7736
C7738
R7728
R7731
R7730
R7735
R7736
R7726
R7725
D7702
R7733
C7733
R7723
C7741
P720
C7775
R7765
C7763
Q762
R7763
R7758
Q763
R7746
C7761
D7722
R7771
C7742
D7720
D7721
R7772
C7743
C7769
R7761
C7702
C7764
D7708
D7707
R7767
Q764
R7766
R7773
D7705
D7706
C7768
C7715
C7714
R7768
P708
P709
L7706
L7705
L7704
R7717
R7712
C7737
C7747
R7732
R7727
R7786
C7722
C7726
C7732
GND
Q761
Q767
R7757
C7762
R7743
R7741
R7742
R7745
D7701
Q757
B705
R7706
R7744
C7767
R7705
R7704
Q772
R7703
C7779
Q773
D7725
D7718
D7717
D7719
R7779
P701B
VD
PROTECT
AFC
SDA
SCL
GND
P702B
12C-S
C-MUTE
C-YS
GND
C-B
C-R
GND
C-G
P803B
-18V
GND
+18V
GND
+35V
GND
5V-1
7V
C7748
C7749
C7750
Q754
+5V
OUT
IN
Q759
R7747
R7738
C7754
C7753
Q755
+9V
R7750
R7749
C7756
C7758
C7760
C7772
Q758
-9V
C7757
C7770
R7783
Q768
R7785
R7782
R7784
R7793
C7778
Q769
D7703
R7787
C7729
R7789
Q770
R7788
Q760
C7771
C7721
R7791
R7790
C7773
Q771
R7792
D7710
C7751
C7755
D7711
SDAM
SCLM
VS
NSCV
SDAU
PARA
DFAI
SCLU
I2CS
NC
YSIN
BIN
RIN
GIN
YS
B
G
R
VD
AG
HD
DG
+5V
-9V
+9V
NSH
BH
GH
BV
GV
RV

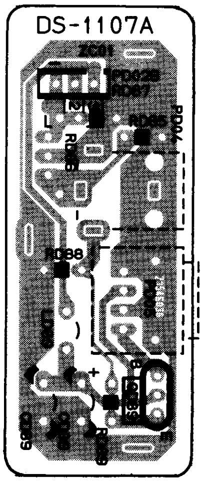
TEXT BOARD PB7928A

BOTTOM (FOIL) SIDE


TOSHIBA
PLC-2147
CF18
CF17
CF09
DF02
CF05
XF01
CF08
DF01
ICF01
1
5
10
15
20
26
27
30
35
40
52
LF10
LF13
CF04
CF11
LF12
LF16
LF07
LF06
PF01A
CF14
LF11
LF05
LF09
LF08
CF20
LF03
LF04
LF02
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
+9V
+5V

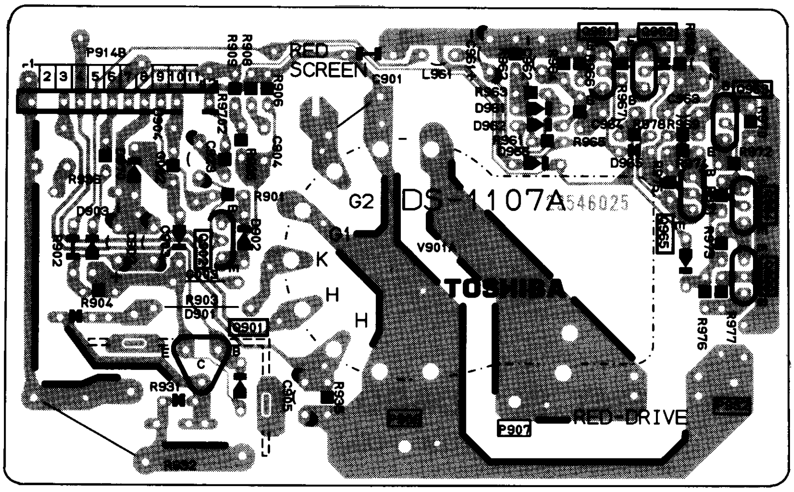
DIGITAL BOARD PB8834B

BOTTOM (FOIL) SIDE


DS-1107A
ZC01
PD02B
RD07
PD04
RD05
RD88

R-DRIVE BOARD PB8764B-1

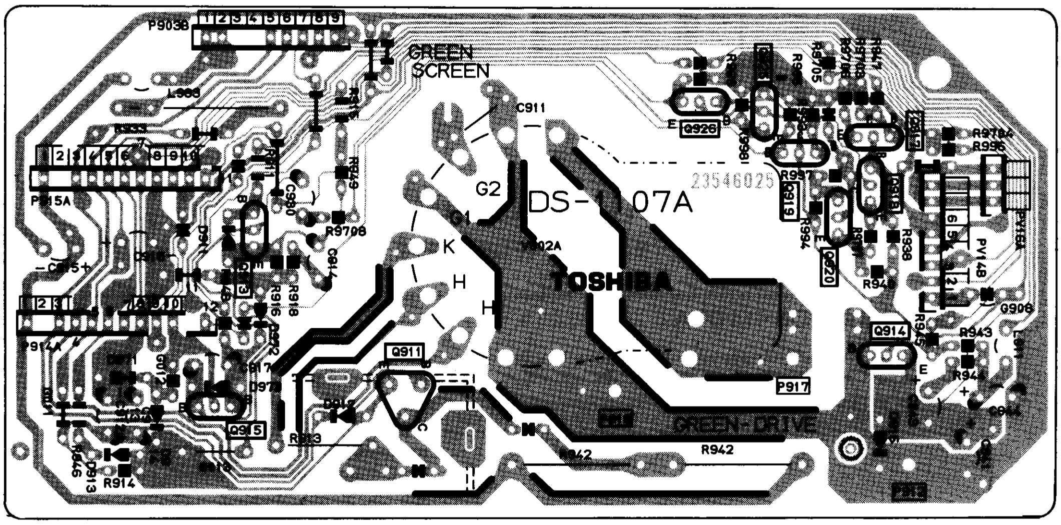
BOTTOM (FOIL) SIDE



P914B
RED SCREEN
C901
L961
R908
R905
R906
R901
D903
D902
R904
R903
D901
Q901
R931
R932
C904
C905
G2
G1
K
H
DS-1107A
23546025
V901
TOSHIBA
D961
D962
D963
R963
R966
R967
R968
R969
R975
R976
R977
P907
RED-DRIVE

G-DRIVE BOARD PB8764B-2

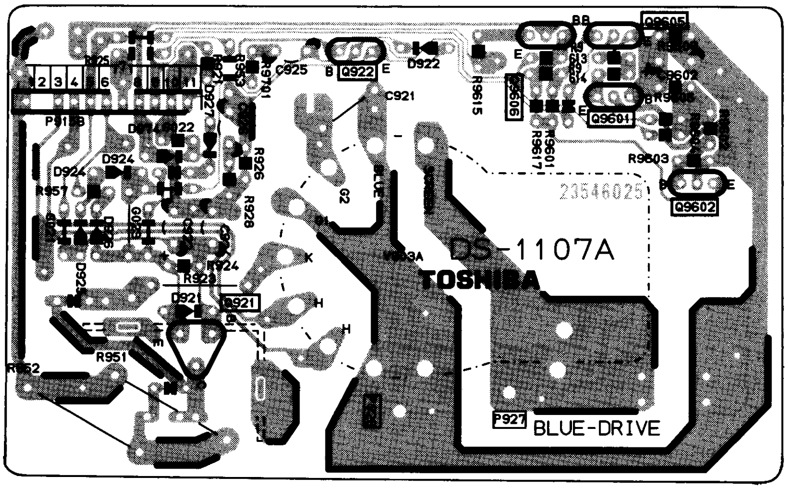
BOTTOM (FOIL) SIDE



P903B
GREEN SCREEN
C911
L966
P915A
P914A
G2
G1
K
H
DS-1107A
23546025
V902A
TOSHIBA
Q926
Q919
Q920
Q914
Q911
Q915
R9709
R916
R918
R943
R942
R914
D913
D911
R994
R996
R9704
P914B
G908
P917
GREEN-DRIVE

B-DRIVE BOARD PB8764B-3

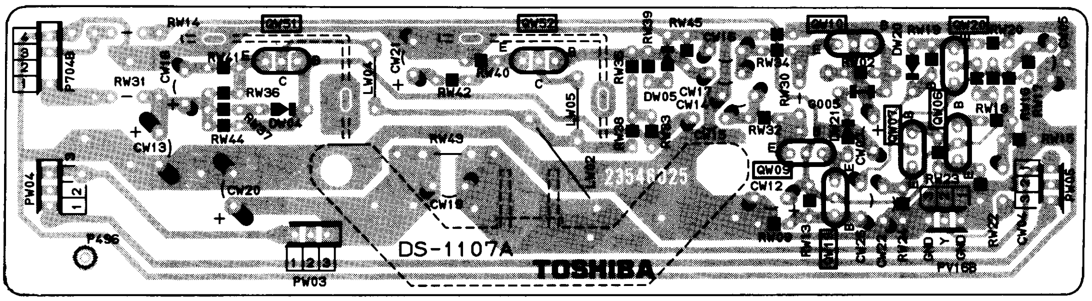
BOTTOM (FOIL) SIDE



P915B
C925
Q922
D922
C921
R9701
R9615
Q9606
Q9605
Q9601
R9601
R9617
R9603
Q9602
D924
R957
D921
Q921
R923
R924
R926
R928
R951
R952
G2
K
H
DS-1107A
23546025
TOSHIBA
P927
BLUE-DRIVE

SVM BOARD PB8764B-4

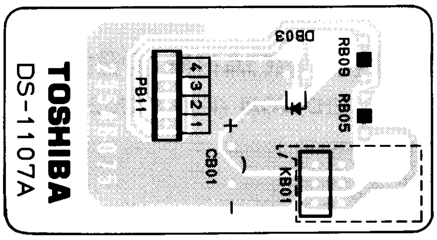
BOTTOM (FOIL) SIDE



P704B
RW14
RW31
CW18
RW41E
RW36
RW37
DW04
RW44
CW13
PW04
CW20
P496
PW03
QW51
LW04
CW21
RW40
RW42
RW43
CW19
DS-1107A
TOSHIBA
QW52
LW05
RW39
RW45
RW34
DW05
CW17
CW14
RW32
CW12
QW05
RW30
QW10
QW20
RW19
RW20
RW18
QW06
RW23
RW22
PV16B
GND
RW16

RMT IN BOARD PB8917A-1

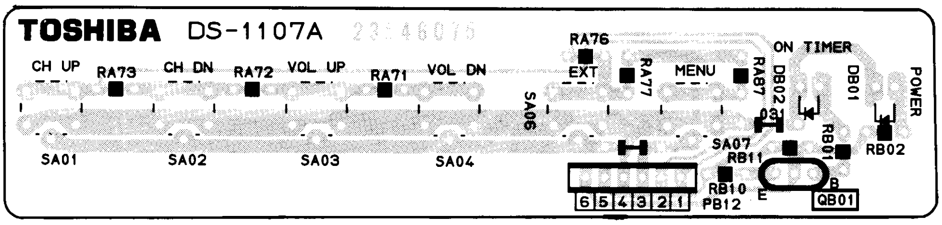
BOTTOM (FOIL) SIDE



TOSHIBA
DS-1107A
PB11
DB03
RB09
RB05
CB01
KB01

FRONT CONTROL BOARD PB8917A-2

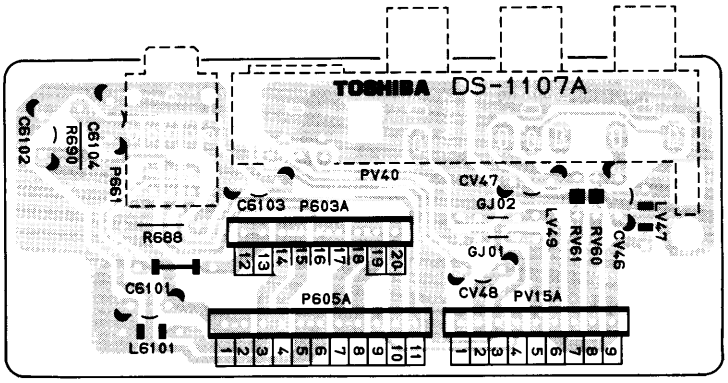
BOTTOM (FOIL) SIDE



TOSHIBA
DS-1107A
CH UP
RA73
CH DN
RA72
VOL UP
RA71
VOL DN
SA01
SA02
SA03
SA04
SA06
RA76
EXT
RA77
MENU
RA87
ON TIMER
DB02
DB01
POWER
SA07
RB11
RB01
RB02
RB10
PB12
QB01

AUDIO IN BOARD PB8917A-3

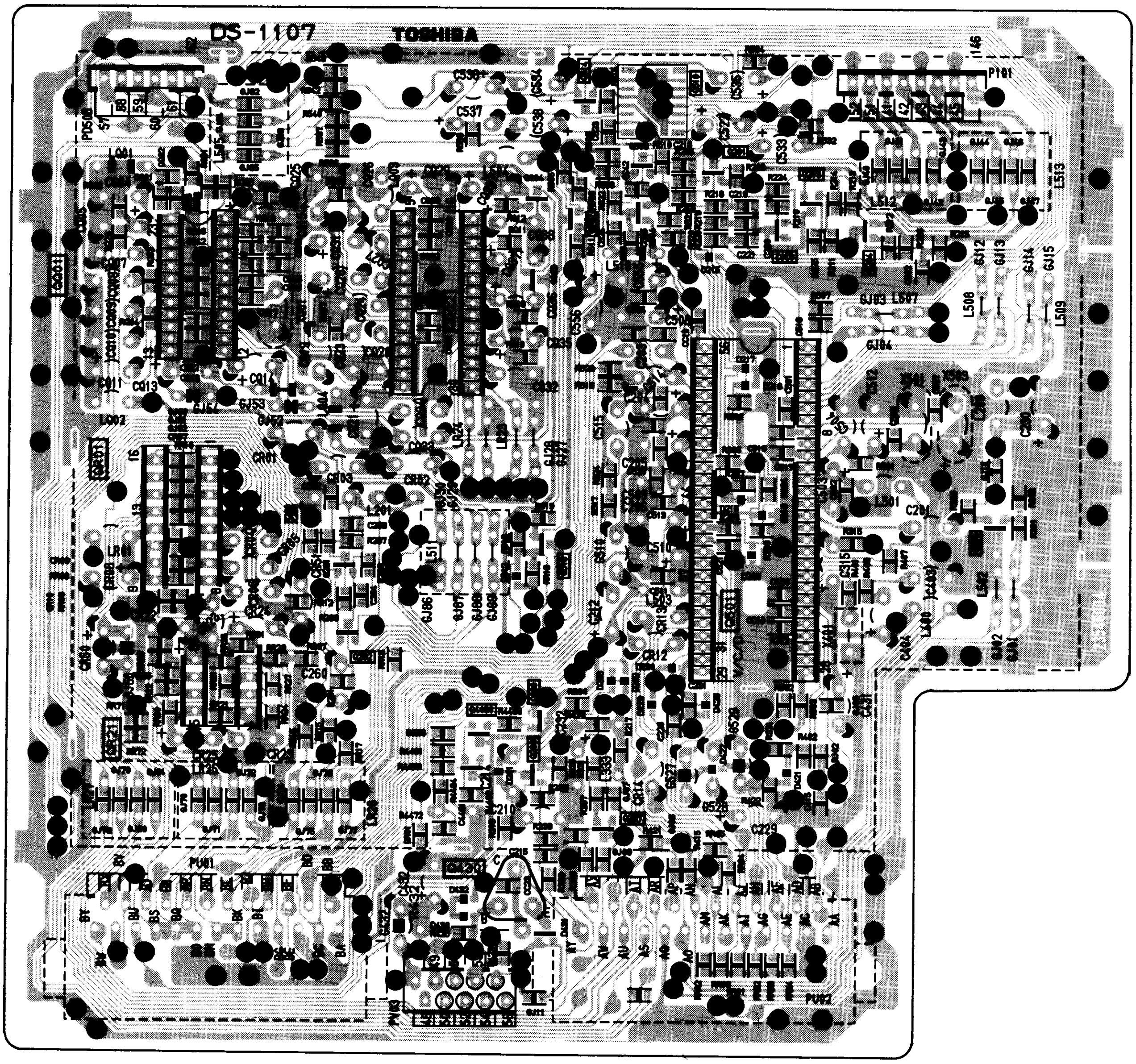
BOTTOM (FOIL) SIDE



TOSHIBA
DS-1107A
C6102
R690
C6104
P661
PV40
C6103
P603A
R688
C6101
L6101
P605A
CV47
GJ02
LV49
RV61
RV60
CV46
LV47
GJ01
CV48
PV15A

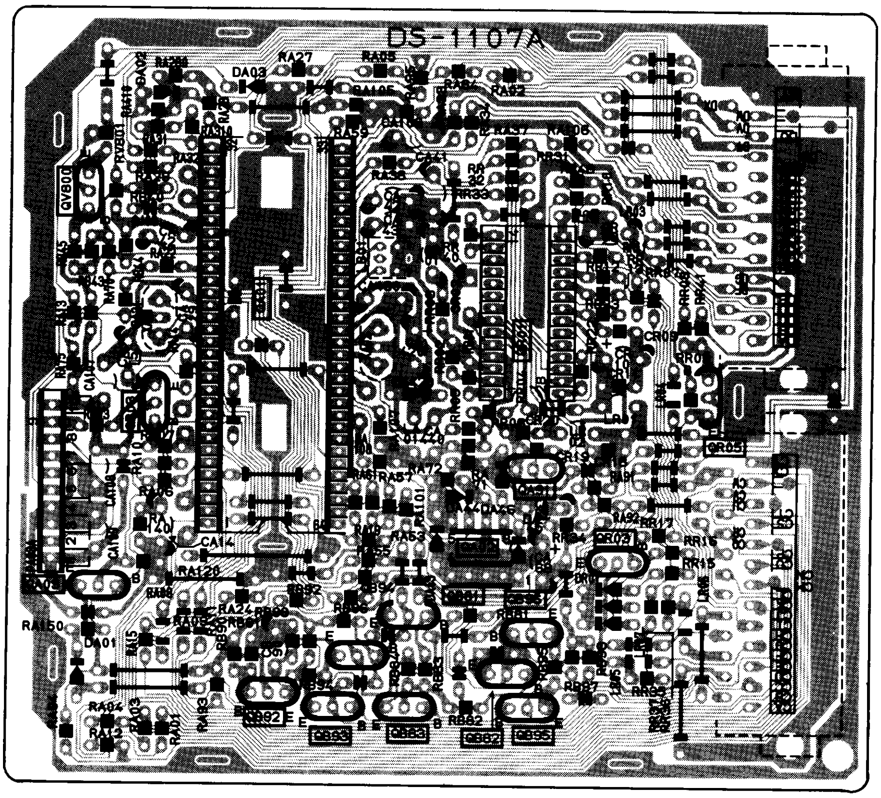
VCD BOARD PB8768A

BOTTOM (FOIL) SIDE


DS-1107
TOSHIBA
P101
PD500
PU01
PU02
L513
L508
L509
C537
C536
C260
C210
C229
C201

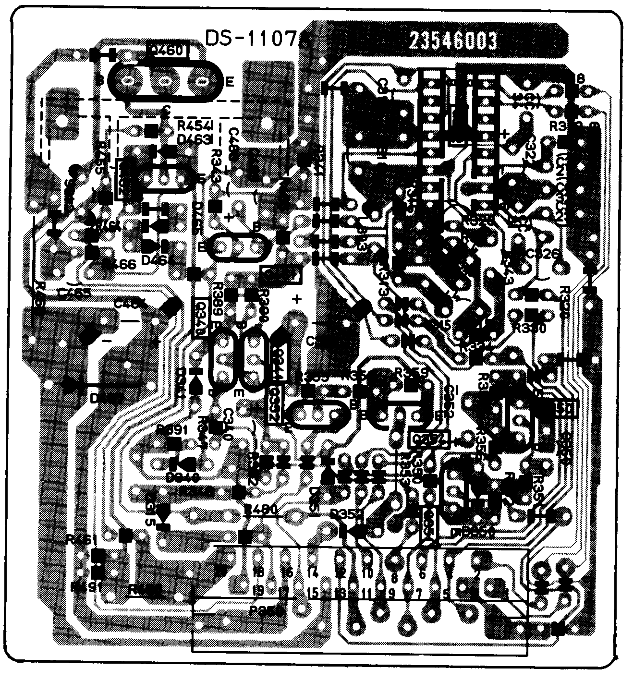
MICRO BOARD PB8767C-1

BOTTOM (FOIL) SIDE


DS-1107A
DA03
RA27
RA105
CA11
RA36
QV800
RA120
CA14
QR05
QR02
RA150
DA01
Q892
Q893
Q883
Q882
Q896
RB82
RR15
RR16
RR17

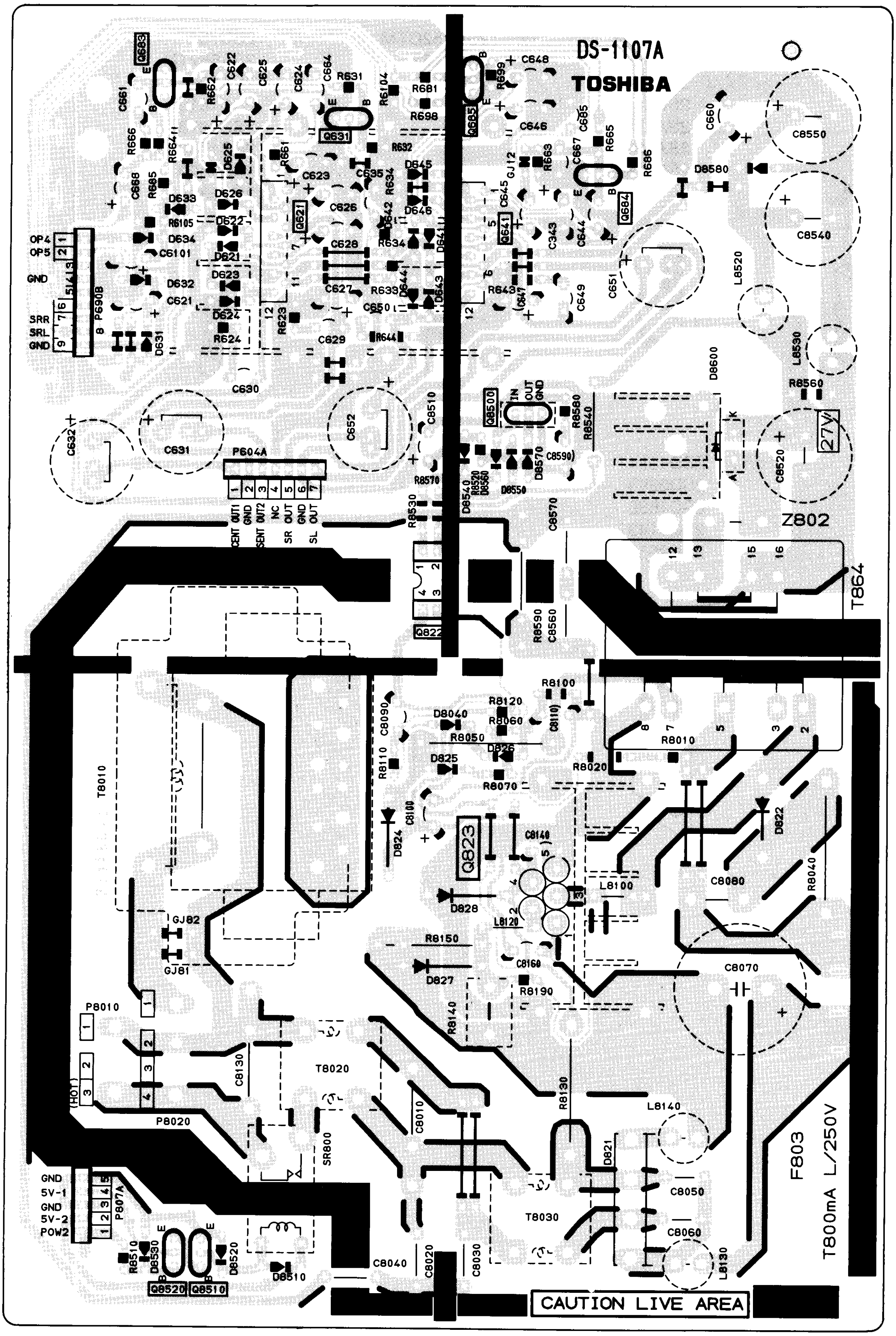
DPC BOARD PB8767C-2

BOTTOM (FOIL) SIDE


DS-1107A
23546003
Q460
E
R454
D463
D466
D467
C465
C464
R389
Q344
C326
R330
Q352
R480
R461
R491
R351

POWER2 BOARD PB8917A-4

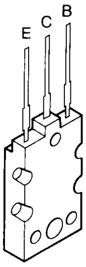
BOTTOM (FOIL) SIDE



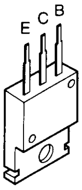
DS-1107A
TOSHIBA
Q683
C661
R662
C622
C625
C624
C664
R631
R6104
R681
R698
Q685
R699
C648
C646
C665
R665
C660
C8550
Q631
R632
R666
R6641
D625
R661
C623
C635
R634
D645
GJ12
R663
C667
R686
Q682
D8580
C668
R685
D633
D626
C626
C642
D646
C645
C644
C540
C8540
OP4
OP5
GND
SRR
SRL
P690B
R6105
D622
Q621
D634
C6101
D621
C628
R634
D641
Q641
C343
D632
D623
C621
D624
R624
D631
C627
R633
D644
D643
C650
R623
C629
R644
R643
C647
C649
C651
L8520
L8530
D8600
R8560
C630
C632
C631
C652
C8510
Q8500
IN
OUT
GND
R8580
R8540
C8590
D8570
C8520
27V
P604A
1
2
3
4
5
6
7
CENT OUT1
GND
SENT OUT2
NC
SR OUT
GND
SL OUT
R8570
D8540
R8520
D8560
D8550
C8570
R8530
Z802
12
13
15
16
T864
Q822
R8590
C8560
R8100
R8120
C8090
D8040
R8060
C8110
R8050
R8110
D826
D825
R8020
R8010
8
7
5
3
2
R8070
T8010
D824
C8100
Q823
C8140
D822
L8100
C8080
R8040
D828
L8120
GJ82
GJ81
R8150
D827
C8160
R8190
C8070
P8010
R8140
C8130
T8020
R8130
L8140
(HOT)
P8020
C8010
SR800
D821
C8050
F803
T800mA L/250V
GND
5V-1
GND
5V-2
POW2
P807A
T8030
C8060
R8510
D8530
D8520
Q8520
Q8510
D8510
C8040
C8020
C8030
L8130
CAUTION LIVE AREA

TERMINAL VIEW OF TRANSISTORS

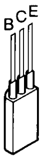
① 2SD2253
(old)
2SC5243



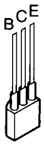
② 2SC3852
2SD1763A
2SC1569
2SC4544
2SA1788
2SA1306
2SA1186A



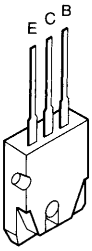
③ 2SC752GTM
2SC2482
2SC2655
2SC4721P



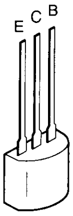
④ 2SC752
2SA562TM
2SA1015
2SC1815
2SC2878
2SC1740S
2SC2120
2SA9335



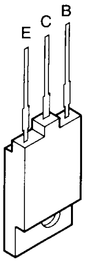
⑤ 2SA1788



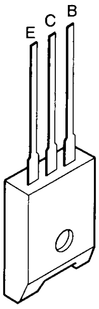
⑥ RN2203
RN2201
RN2004
RN1203
RN1204
RN2204
RN1205
RN1202
RN1201



⑦ 2SD1554
2SD2253
2SD1556
2SC5143
2SD2553



⑧ ON4409



SPECIFICATIONS (Representative : 50PJ98G)

Rated voltage		AC 220 V – 240 V, 50/60 Hz					
Power consumption (at AC 220 V, 50 Hz)		220 W (Approx)					
Dimensions (Width × Height × Depth)		1073 mm × 1284 mm × 529 mm					
Mass		115 kg					
Screen size		Type 50					
Television system (Aerial input)	Channel coverage	**System**		**Channel**	**VHF**	**UHF**	**CATV**
		PAL	B/G	CCIR	2 – 12	21 – 69	X ~ Z+2, S1 ~ S41
		PAL	I	UK	—	21 – 69	—
		SECAM	L	CCIR	*	21 – 69	* VHF : B-C ; 1-6, B-Q, 71-86
		SECAM	D/K	OIRT	1 – 12	21 – 69	X1 ~ X19
	Special RF signal	**Colour system**	**Sound system**				
		4.43NTSC	5.5/6.0/6.5 MHz				
		PAL 60Hz	5.5/6.0/6.5 MHz				
Colour system		PAL/SECAM/4.43NTSC/3.58NTSC					
Sound output		14 W + 14 W					
Accessories		• Remote control unit × 1 • Battery (R03, AAA) × 2					

* Please refer to owner's manual in detail.

TOSHIBA CORPORATION
1-1, SHIBAURA 1-CHOME, MINATO-KU, TOKYO 105-8001, JAPAN

SCHEMATIC DIAGRAM MODEL : 50PJ98B (1/6)

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 3. Do not degrade the safety of the receiver through improper servicing.

030-9915

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position. Set other controls for best picture.

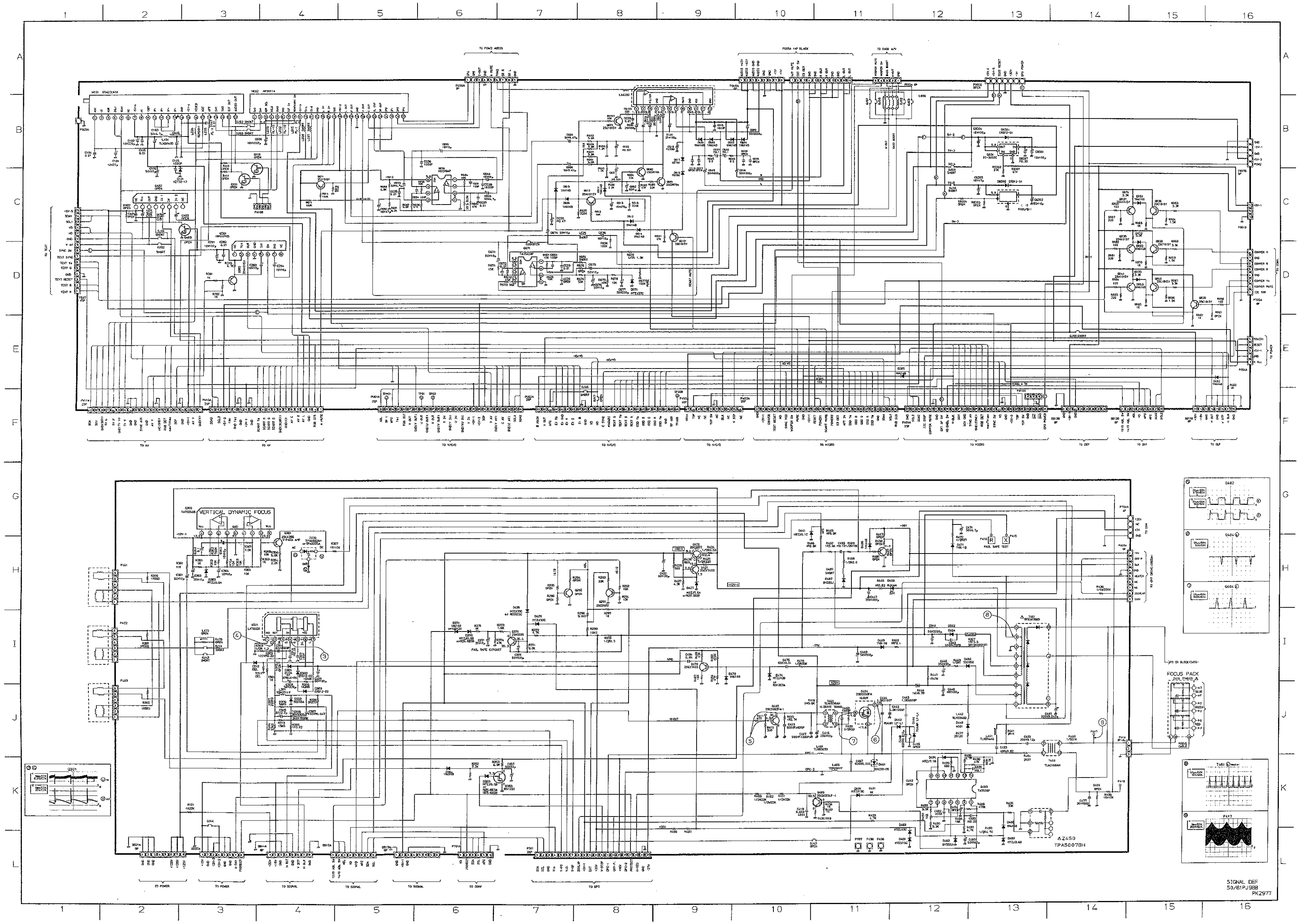
NOTES:

1. D.C. resistance value of a principal transformer is shown in this schematic diagram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH, and the values less than 1 in H.



VERTICAL DYNAMIC FOCUS
FOCUS PACK
T461 Heater
P417
50μs/DIV.
5ms/DIV.
200V/DIV.
⚠Z450
TPA5007BH
R435 33K
R493 1/2R4.7K
D488 1N4148
D489 HTZJ3.6B
C477 2KV1500
R496 1R110K
P418
T400 TLN2158AH
TO POWER
TO SIGNAL
TO CONV
TO GPC
TO AV
TO V/C/D
TO AUDIO
TO FOCUS
TO DEF
TO DLF
TO FOND AUDIO
TO BACK A/V
SIGNAL DEF
50/61PJ98B
PK2977

SCHEMATIC DIAGRAM MODEL : 50PJ98B (1/6)

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate
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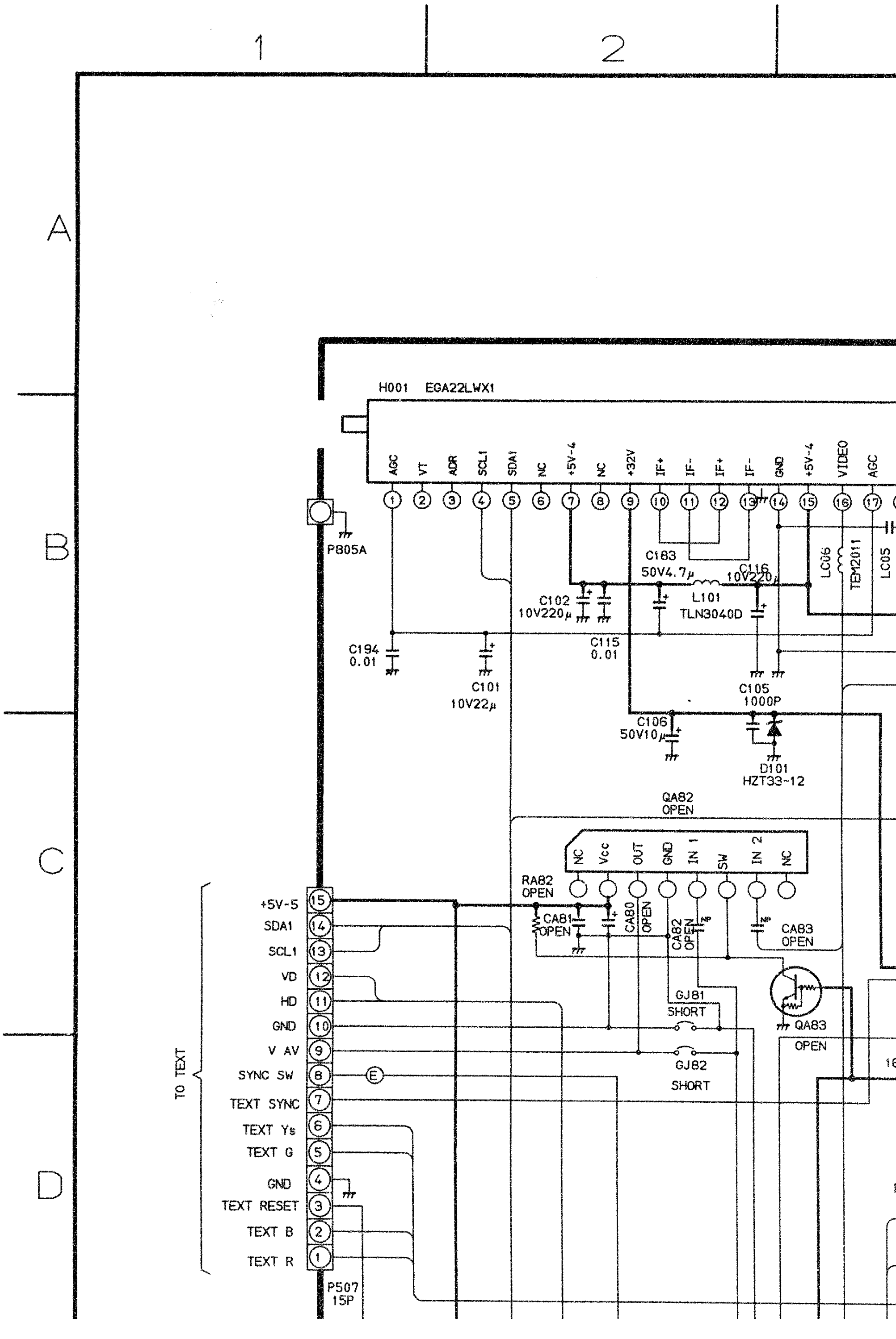
3. Do not degrade the safety of the receiver through improper servicing.

030-9915

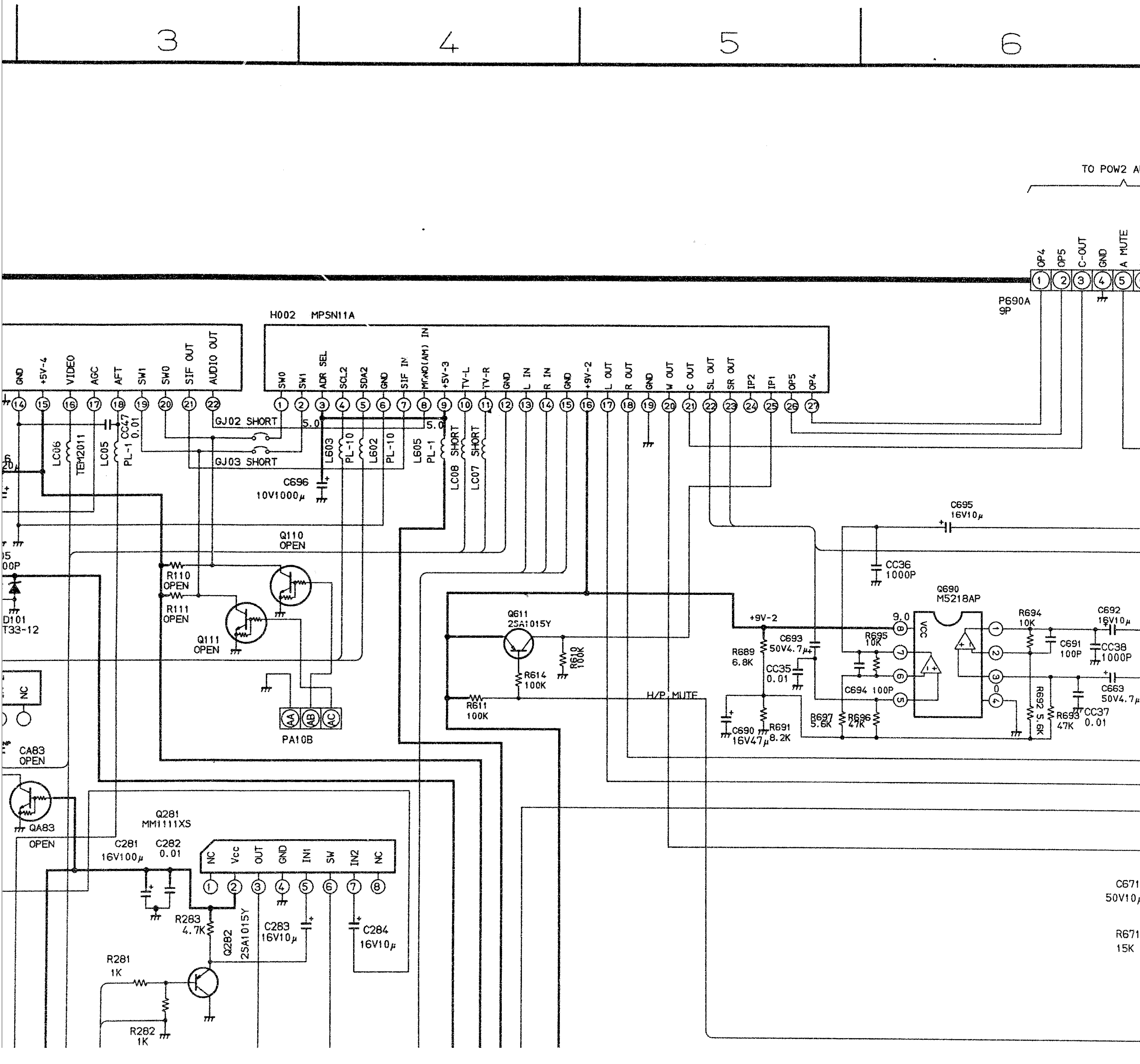

1
2
A
B
C
D
H001 EGA22LWX1
AGC
VT
ADR
SCL1
SDA1
NC
+5V-4
NC
+32V
IF+
IF-
IF+
IF-
GND
+5V-4
VIDEO
AGC
P805A
C183 50V4.7μ
C116 10V220μ
L101 TLN3040D
C102 10V220μ
C115 0.01
C194 0.01
C101 10V22μ
C105 1000P
C106 50V10μ
D101 HZT33-12
LC06
TEM2011
LC05
QA82 OPEN
NC
Vcc
OUT
GND
IN 1
SW
IN 2
NC
RA82 OPEN
CA81 OPEN
CA80 OPEN
CA82 OPEN
CA83 OPEN
GJ81 SHORT
GJ82 SHORT
QA83 OPEN
TO TEXT
+5V-5
SDA1
SCL1
VD
HD
GND
V AV
SYNC SW
TEXT SYNC
TEXT Ys
TEXT G
GND
TEXT RESET
TEXT B
TEXT R
E
P507 15P

/6)

designate com-
ith types identical to
is to be identical
TY NOTICE on page

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line vol
volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capacit
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid posit
BRIGHTNESS control is almost in maximum position. Set other controls
picture.



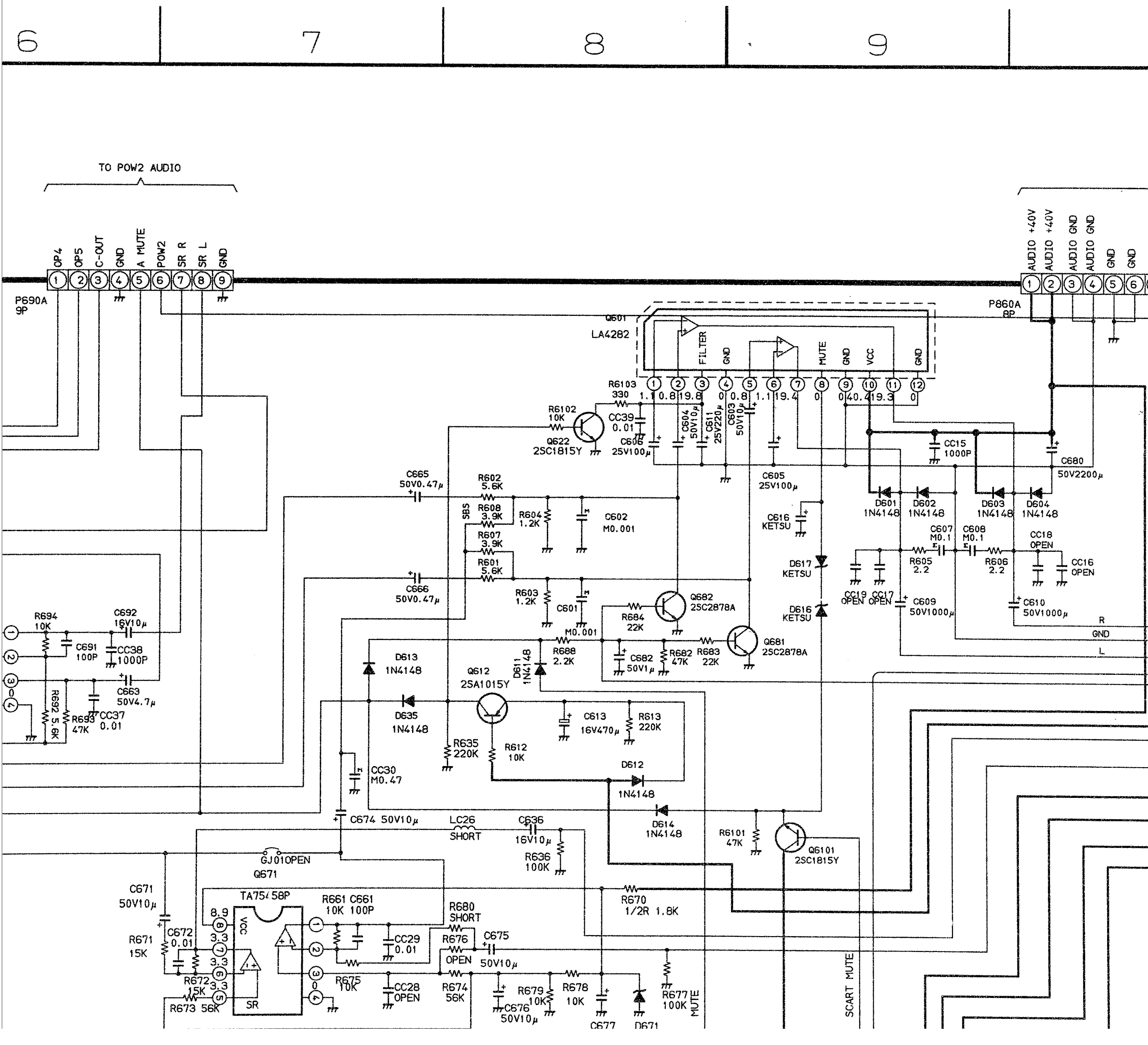
3
4
5
6
TO POW2 A
OP4
OP5
C-OUT
GND
A MUTE
P690A
9P
H002 MPSN11A
GND
+5V-4
VIDEO
AGC
AFT
SW1
SW0
SIF OUT
AUDIO OUT
SW0
SW1
ADR SEL
SCL2
SDA2
GND
SIF IN
M(NO(AM) IN
+5V-3
TV-L
TV-R
GND
L IN
R IN
GND
+9V-2
L OUT
R OUT
GND
W OUT
C OUT
SL OUT
SR OUT
IP2
IP1
OP5
OP4
GJ02 SHORT
GJ03 SHORT
5.0
5.0
CC47
0.01
LC06
TEM2011
LC05
PL-1
L603
PL-10
L602
PL-10
L605
PL-1
LC08 SHORT
LC07 SHORT
C696
10V1000μ
Q110
OPEN
R110
OPEN
R111
OPEN
Q111
OPEN
PA10B
AA
AB
AC
D101
T33-12
00P
NC
CA83
OPEN
QA83
OPEN
C695
16V10μ
CC36
1000P
Q690
M5218AP
+9V-2
9.0
VCC
R694
10K
C692
16V10μ
C691
100P
CC38
1000P
C663
50V4.7μ
R692 5.6K
R693
47K
CC37
0.01
R695
10K
C693
50V4.7μ
R689
6.8K
CC35
0.01
C694 100P
R697
5.6K
R696
47K
C690
16V47μ
R691
8.2K
0
Q611
2SA1015Y
R610
100K
R614
100K
R611
100K
H/P MUTE
Q281
MM1111XS
C281
16V100μ
C282
0.01
NC
Vcc
OUT
GND
IN1
SW
IN2
NC
R283
4.7K
Q282
2SA1015Y
C283
16V10μ
C284
16V10μ
R281
1K
R282
1K
C671
50V10
R671
15K

ound, line voltage 220
.
d a low capacity probe.

in mid position and
other controls for best

NOTES:

1. D.C. resistance value of a principal transformer is shown
   gram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ● : Solder links.

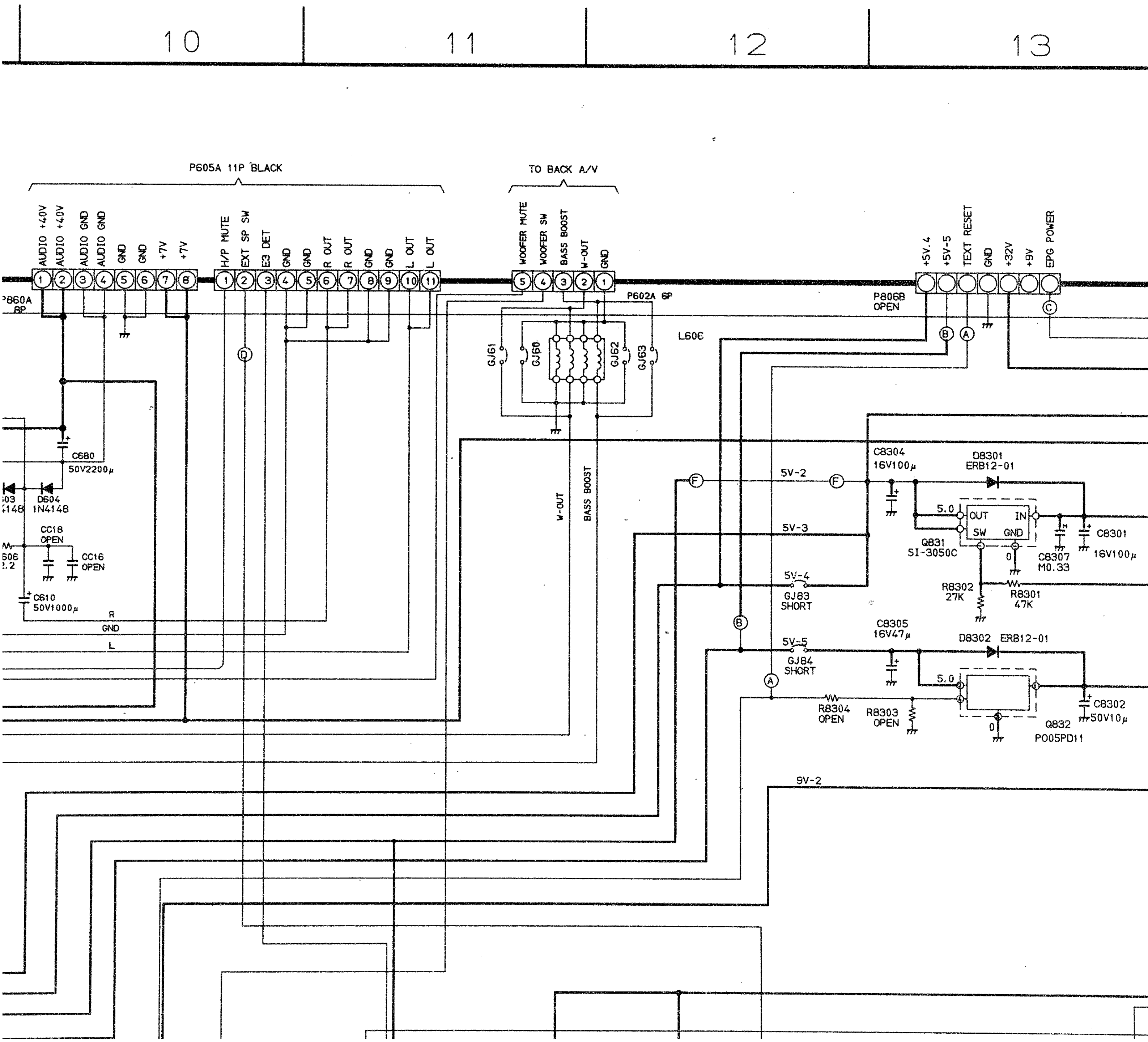

6
7
8
9
TO POW2 AUDIO
OP4
OP5
C-OUT
GND
A MUTE
POW2
SR R
SR L
GND
P690A
9P
AUDIO +40V
AUDIO +40V
AUDIO GND
AUDIO GND
GND
GND
P860A
8P
Q601
LA4282
FILTER
GND
MUTE
GND
VCC
GND
R6103
330
R6102
10K
Q622
2SC1815Y
CC39
0.01
C606
25V100μ
C604
50V10μ
C611
25V220μ
C603
50V10μ
C605
25V100μ
CC15
1000P
C680
50V2200μ
D601
1N4148
D602
1N4148
D603
1N4148
D604
1N4148
C665
50V0.47μ
R602
5.6K
SBS
R608
3.9K
R604
1.2K
C602
M0.001
R607
3.9K
R601
5.6K
C666
50V0.47μ
R603
1.2K
C601
M0.001
C616
KETSU
D617
KETSU
D616
KETSU
Q682
2SC2878A
Q681
2SC2878A
R684
22K
R688
2.2K
C682
50V1μ
R682
47K
R683
22K
C607
M0.1
C608
M0.1
R605
2.2
R606
2.2
CC18
OPEN
CC16
OPEN
CC19
OPEN
CC17
OPEN
C609
50V1000μ
C610
50V1000μ
R
GND
L
R694
10K
C692
16V10μ
C691
100P
CC38
1000P
C663
50V4.7μ
R692 5.6K
R693
47K
CC37
0.01
D613
1N4148
Q612
2SA1015Y
D611
1N4148
D635
1N4148
C613
16V470μ
R613
220K
R635
220K
R612
10K
D612
1N4148
CC30
M0.47
C674 50V10μ
LC26
SHORT
C636
16V10μ
R636
100K
D614
1N4148
R6101
47K
Q6101
2SC1815Y
GJ010OPEN
Q671
C671
50V10μ
R671
15K
C672
0.01
R672
15K
R673 56K
TA7558P
VCC
SR
8.9
3.3
3.3
3.3
R661 C661
10K 100P
CC29
0.01
R680
SHORT
R676
OPEN
C675
50V10μ
R675
10K
CC28
OPEN
R674
56K
C676
50V10μ
R679
10K
R678
10K
C677
D671
R677
100K
MUTE
R670
1/2R 1.8K
SCART MUTE

mer is shown in this schematic dia-
 the circuit.
tice.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDU

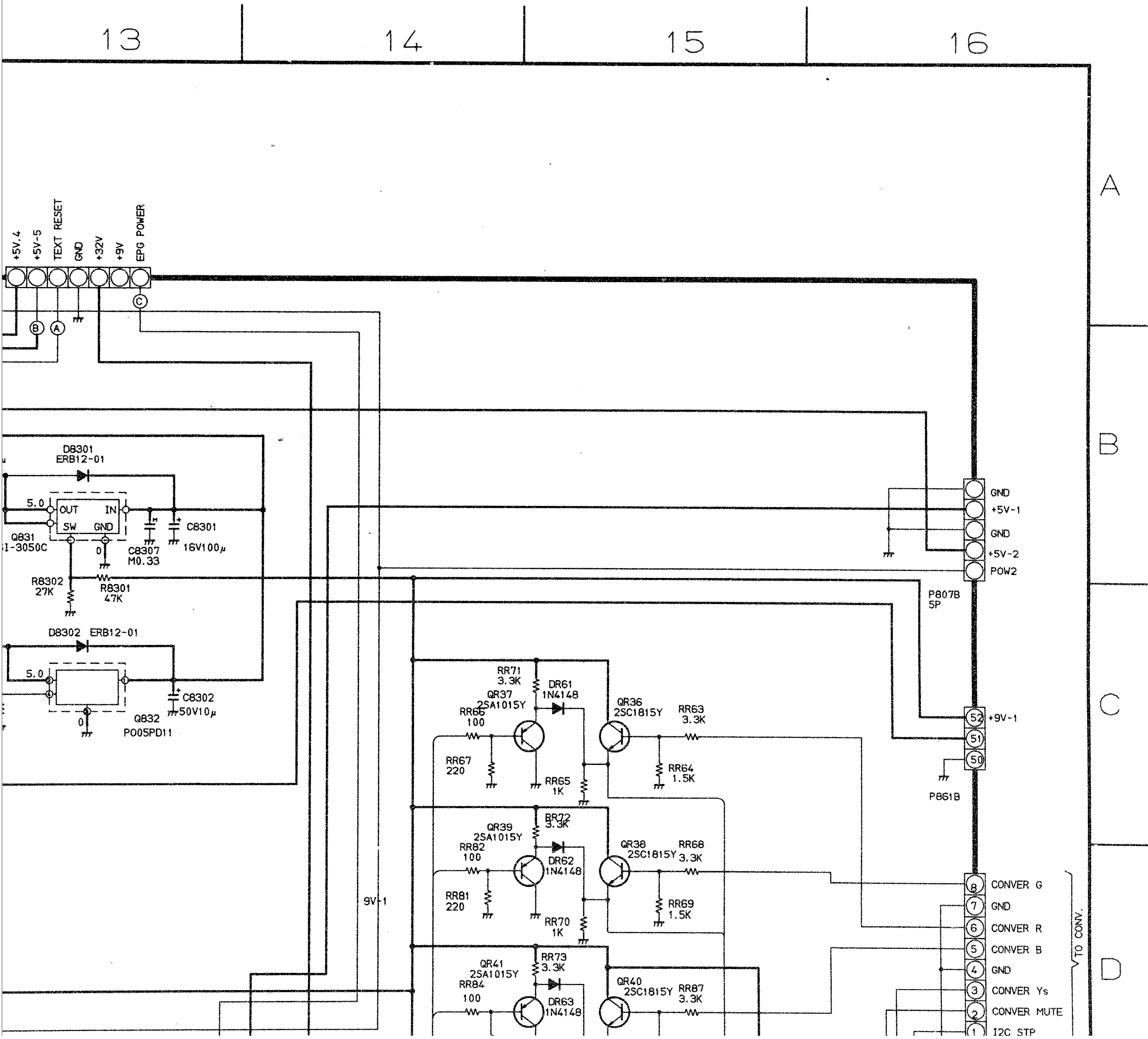
1. Resistance is shown in ohm, k=1,000, M=1,000,0
2. Unless other wise noted in schematic, all capac
   sed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inducto
   sed in μH, and the values less than 1 in H.



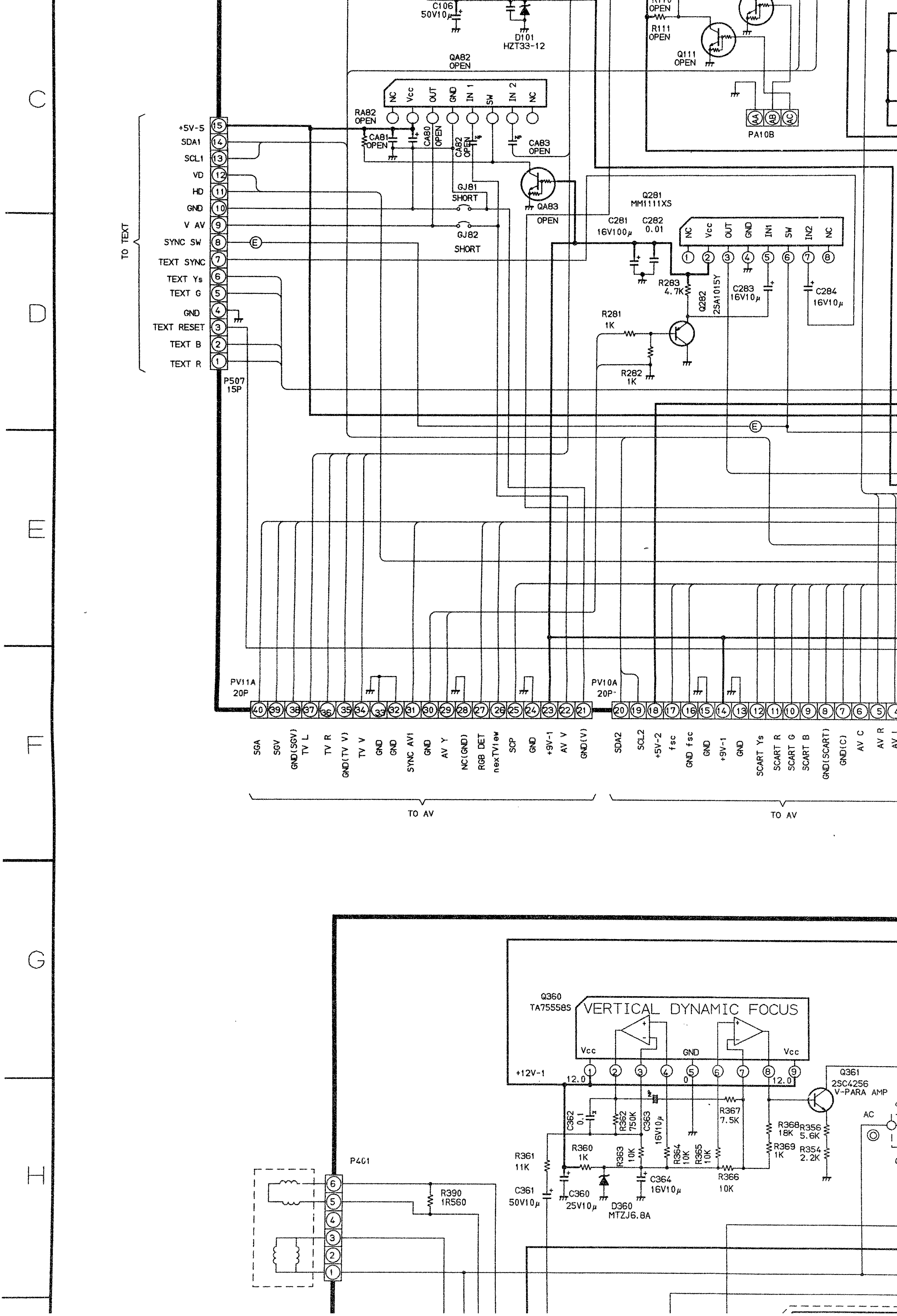
10
11
12
13
P605A 11P BLACK
AUDIO +40V
AUDIO +40V
AUDIO GND
AUDIO GND
GND
GND
+7V
+7V
H/P MUTE
EXT SP SW
E3 DET
GND
GND
R OUT
R OUT
GND
GND
L OUT
L OUT
TO BACK A/V
WOOFER MUTE
WOOFER SW
BASS BOOST
W-OUT
GND
P602A 6P
P860A
8P
GJ61
GJ60
GJ62
GJ63
L606
W-OUT
BASS BOOST
+5V.4
+5V-5
TEXT RESET
GND
+32V
+9V
EPG POWER
P806B
OPEN
C680
50V2200μ
D604
1N4148
CC18
OPEN
CC16
OPEN
C610
50V1000μ
R
GND
L
5V-2
5V-3
5V-4
GJ83
SHORT
5V-5
GJ84
SHORT
C8304
16V100μ
D8301
ERB12-01
5.0
OUT
IN
SW
GND
Q831
SI-3050C
C8307
M0.33
C8301
16V100μ
R8302
27K
R8301
47K
C8305
16V47μ
D8302 ERB12-01
R8304
OPEN
R8303
OPEN
Q832
P005PD11
C8302
50V10μ
9V-2

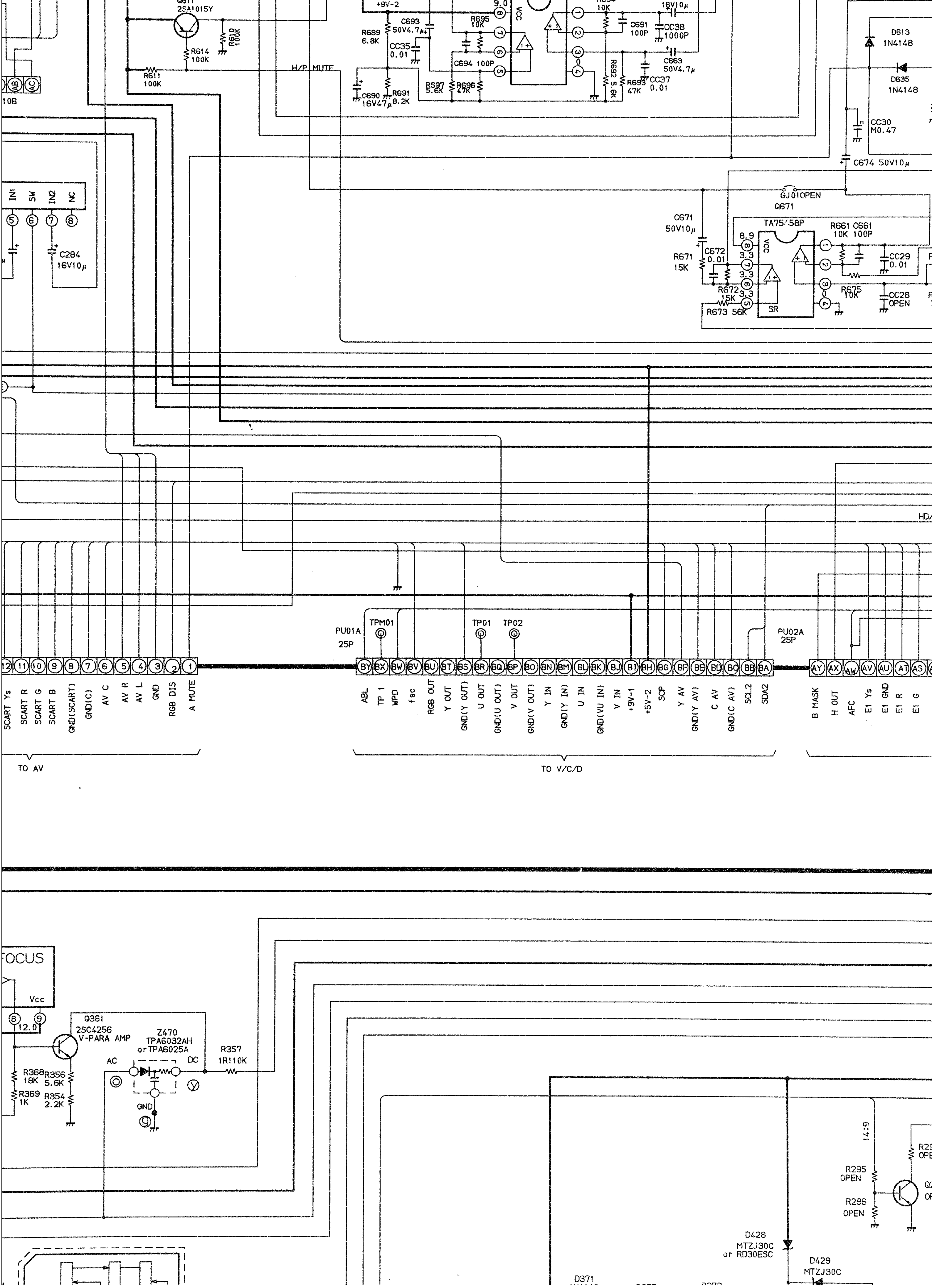
APACITOR and INDUCTOR

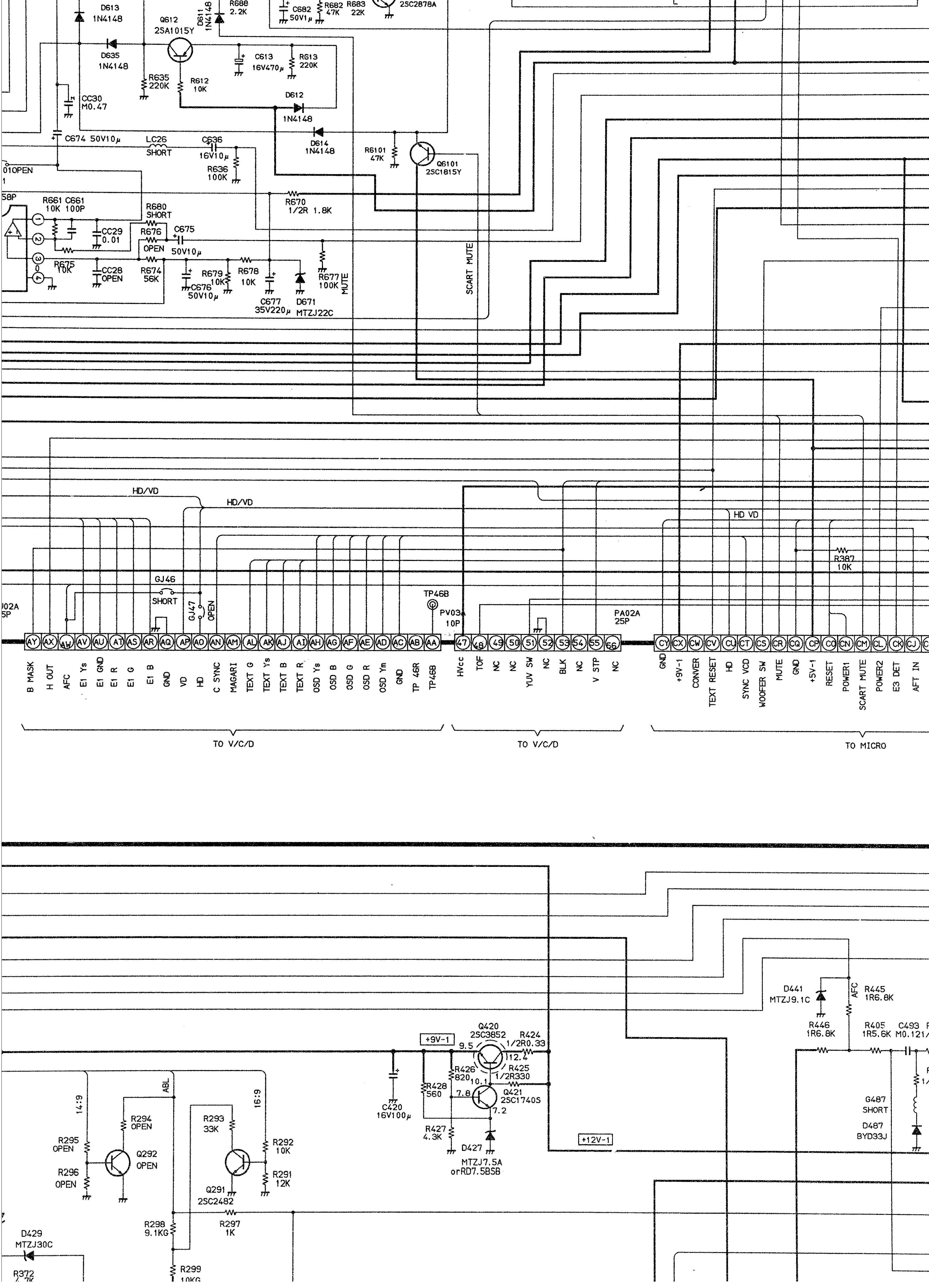
n, k=1,000, M=1,000,000
n schematic, all capacitor values less than 1 are expres-
ore than 1 in pF.
schematic, all inductor values more than 1 are expres-
ess than 1 in H.

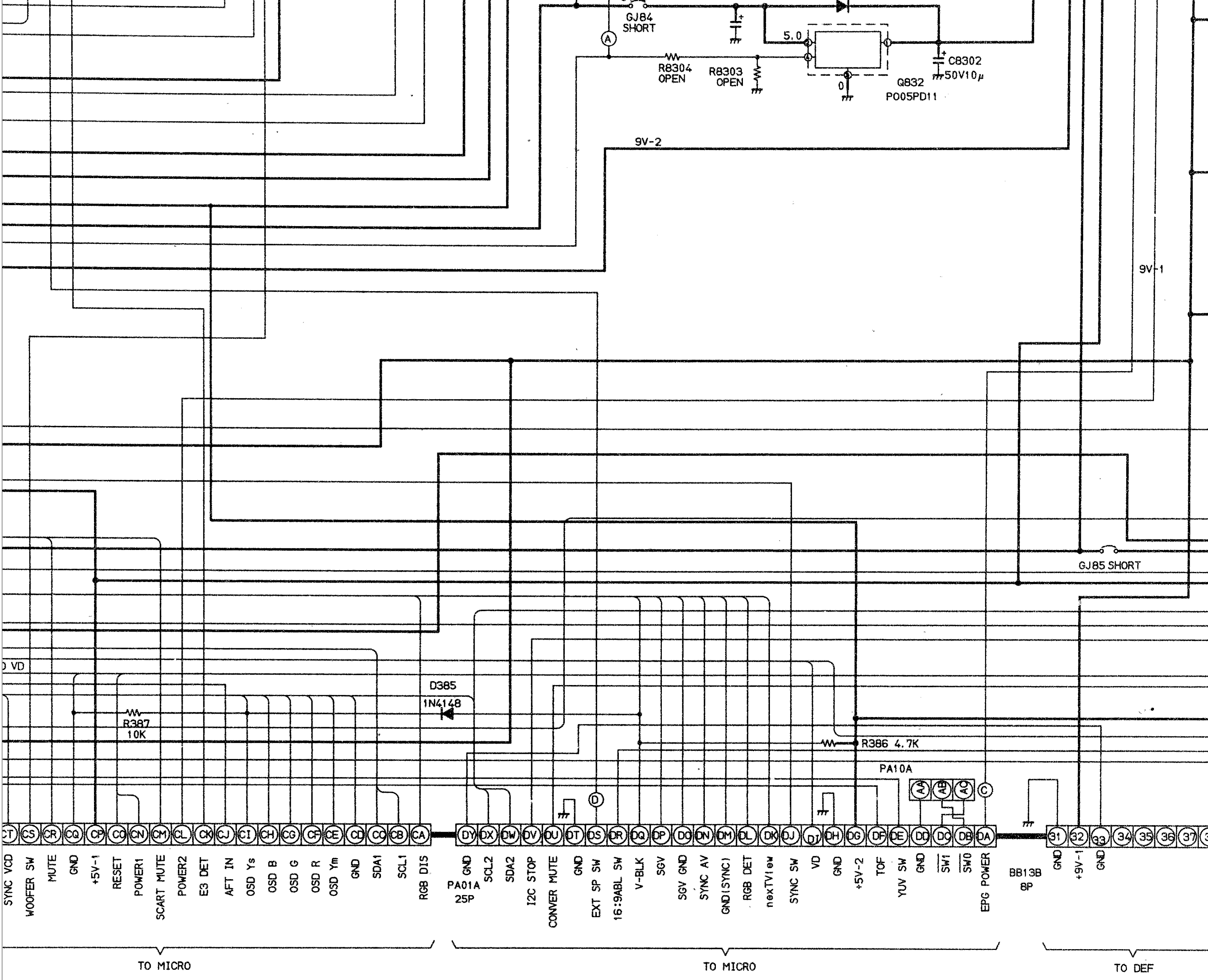


13
14
15
16
A
B
C
D
+5V.4
+5V-5
TEXT RESET
GND
+32V
+9V
EPG POWER
B
A
C
D8301
ERB12-01
5.0
OUT
IN
SW
GND
0
Q831
I-3050C
C8307
M0.33
C8301
16V100μ
R8302
27K
R8301
47K
D8302 ERB12-01
5.0
0
C8302
50V10μ
Q832
P005PD11
RR71
3.3K
DR61
1N4148
QR37
2SA1015Y
RR66
100
RR67
220
RR65
1K
QR36
2SC1815Y
RR63
3.3K
RR64
1.5K
QR39
2SA1015Y
RR72
3.3K
RR82
100
DR62
1N4148
RR81
220
RR70
1K
QR38
2SC1815Y
RR68
3.3K
RR69
1.5K
9V-1
QR41
2SA1015Y
RR73
3.3K
RR84
100
DR63
1N4148
QR40
2SC1815Y
RR87
3.3K
GND
+5V-1
GND
+5V-2
POW2
P807B
5P
52 +9V-1
51
50
P861B
8 CONVER G
7 GND
6 CONVER R
5 CONVER B
4 GND
3 CONVER Ys
2 CONVER MUTE
1 I2C STP
TO CONV.

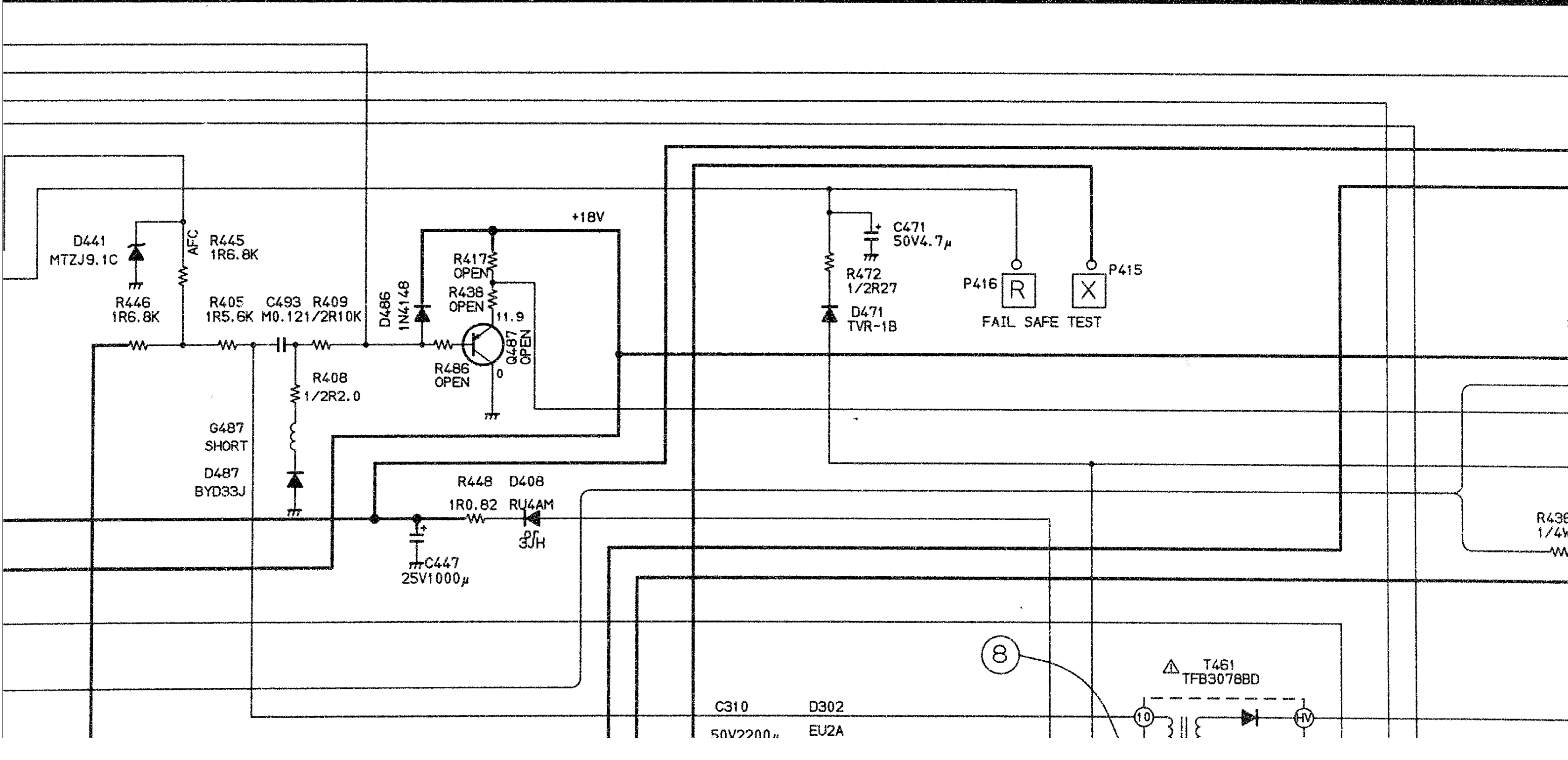

C
D
E
F
G
H
C106
50V10μ
D101
HZT33-12
R110
OPEN
R111
OPEN
Q111
OPEN
PA10B
AA
AB
AC
QA82
OPEN
NC
Vcc
OUT
GND
IN 1
SW
IN 2
NC
RA82
OPEN
CA81
OPEN
CA80
OPEN
CA82
OPEN
CA83
OPEN
GJ81
SHORT
GJ82
SHORT
QA83
OPEN
+5V-5
SDA1
SCL1
VD
HD
GND
V AV
SYNC SW
TEXT SYNC
TEXT Ys
TEXT G
GND
TEXT RESET
TEXT B
TEXT R
TO TEXT
P507
15P
E
Q281
MM1111XS
C281
16V100μ
C282
0.01
R283
4.7K
Q282
2SA1015Y
C283
16V10μ
C284
16V10μ
R281
1K
R282
1K
PV11A
20P
PV10A
20P
SGA
SGV
GND(SGV)
TV L
TV R
GND(TV V)
TV V
GND
GND
SYNC AV1
GND
AV Y
NC(GND)
RGB DET
nexTView
SCP
GND
+9V-1
AV V
GND(V)
SDA2
SCL2
+5V-2
fsc
GND fsc
GND
+9V-1
GND
SCART Ys
SCART R
SCART G
SCART B
GND(SCART)
GND(C)
AV C
AV R
AV L
TO AV
TO AV
Q360
TA7555BS
VERTICAL DYNAMIC FOCUS
Vcc
GND
Vcc
+12V-1
12.0
0
12.0
Q361
2SC4256
V-PARA AMP
AC
C362
0.1
R362
750K
C363
16V10μ
R367
7.5K
R368
18K
R356
5.6K
R369
1K
R354
2.2K
R361
11K
R360
1K
R363
10K
R364
10K
R365
10K
R366
10K
C361
50V10μ
C360
25V10μ
D360
MTZJ6.8A
C364
16V10μ
P401
R390
1R560


Q611
2SA1015Y
R610 100K
R614 100K
R611 100K
H/P MUTE
+9V-2
9.0
VCC
C693 50V4.7μ
R689 6.8K
R695 10K
CC35 0.01
C694 100P
R697 5.6K
R696 47K
C690 16V47μ
R691 8.2K
R694 10K
16V10μ
C691 100P
CC38 1000P
C663 50V4.7μ
R692 5.6K
R693 47K
CC37 0.01
D613 1N4148
D635 1N4148
CC30 M0.47
C674 50V10μ
GJ010OPEN
Q671
TA7558P
C671 50V10μ
R671 15K
C672 0.01
R672 15K
R673 56K
8.9
3.3
SR
R661 10K
C661 100P
CC29 0.01
R675 10K
CC28 OPEN
AB
AC
10B
IN1
SW
IN2
NC
C284 16V10μ
HD/
PU01A 25P
TPM01
TP01
TP02
PU02A 25P
SCART Ys
SCART R
SCART G
SCART B
GND(SCART)
GND(C)
AV C
AV R
AV L
GND
RGB DIS
A MUTE
TO AV
ABL
TP 1
WPD
fsc
RGB OUT
Y OUT
GND(Y OUT)
U OUT
GND(U OUT)
V OUT
GND(V OUT)
Y IN
GND(Y IN)
U IN
GND(VU IN)
V IN
+9V-1
+5V-2
SCP
Y AV
GND(Y AV)
C AV
GND(C AV)
SCL2
SDA2
TO V/C/D
B MASK
H OUT
AFC
E1 Ys
E1 GND
E1 R
E1 G
FOCUS
Vcc
12.0
Q361
2SC4256
V-PARA AMP
R368 18K
R356 5.6K
R369 1K
R354 2.2K
Z470
TPA6032AH
or TPA6025A
AC
DC
GND
R357
1R110K
14:9
R295 OPEN
R296 OPEN
D428
MTZJ30C
or RD30ESC
D429
MTZJ30C
D371

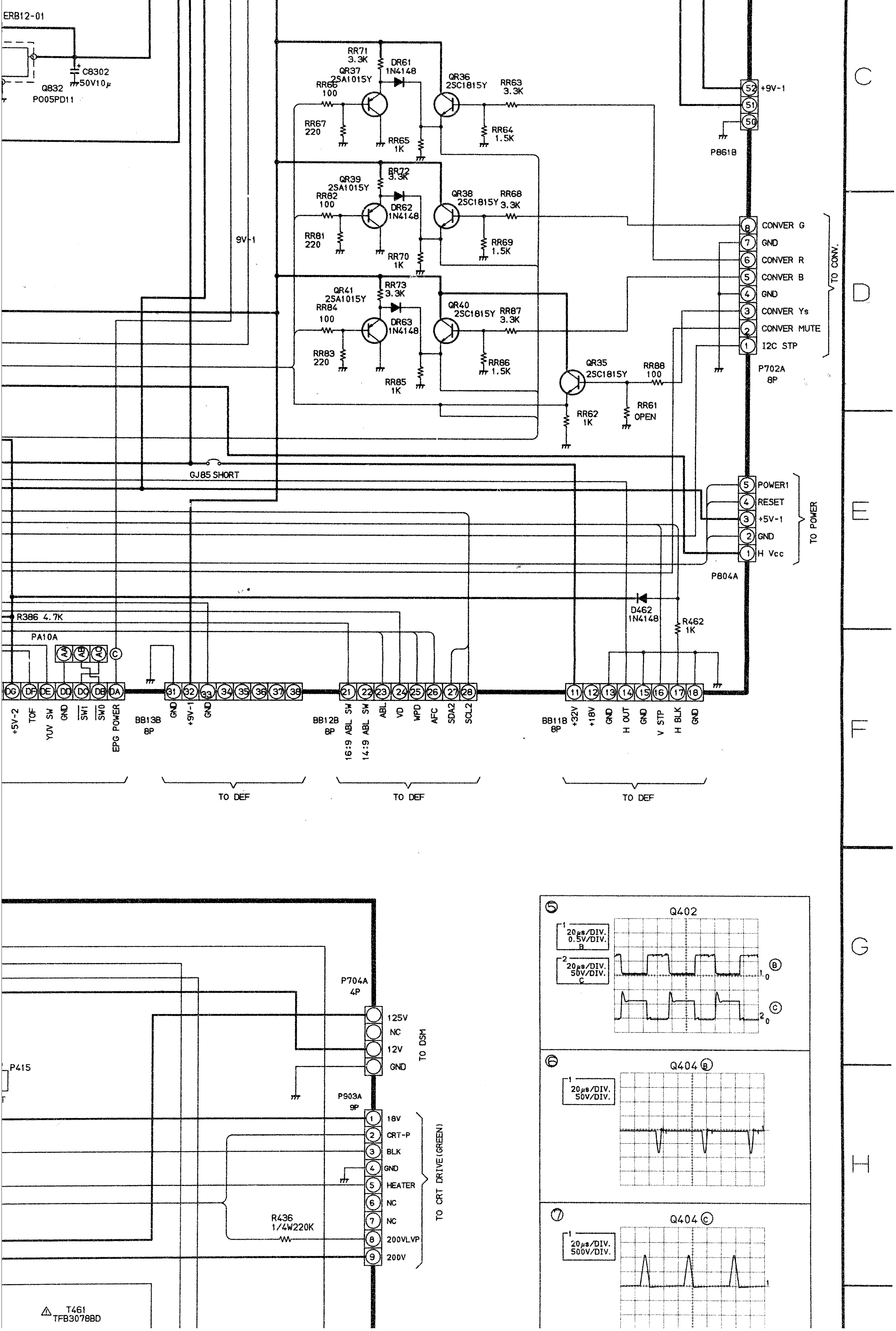

D613
1N4148
Q612
2SA1015Y
D611
1N4148
R688
2.2K
C682
50V1μ
R682
47K
R683
22K
2SC2878A
D635
1N4148
C613
16V470μ
R613
220K
R635
220K
R612
10K
D612
1N4148
CC30
M0.47
C674 50V10μ
LC26
SHORT
C636
16V10μ
D614
1N4148
R6101
47K
Q6101
2SC1815Y
R636
100K
010PEN
58P
R661 C661
10K 100P
R670
1/2R 1.8K
R680
SHORT
CC29
0.01
R676
OPEN
C675
50V10μ
R675
10K
CC28
OPEN
R674
56K
C676
50V10μ
R679
10K
R678
10K
C677
35V220μ
D671
MTZJ22C
R677
100K
MUTE
SCART MUTE
HD/VD
HD/VD
HD VD
R387
10K
GJ46
SHORT
GJ47
OPEN
02A
5P
TP46B
PV03A
10P
PA02A
25P
AY AX AW AV AU AT AS AR AQ AP AO AN AM AL AK AJ AI AH AG AF AE AD AC AB AA
47 48 49 50 51 52 53 54 55 56
CY CX CW CV CU CT CS CR CQ CP CO CN CM CL CK CJ
B MASK
H OUT
AFC
E1 Ys
E1 GND
E1 R
E1 G
E1 B
GND
VD
HD
C SYNC
MAGARI
TEXT G
TEXT Ys
TEXT B
TEXT R
OSD Ys
OSD B
OSD G
OSD R
OSD Ym
GND
TP 46R
TP46B
HVcc
TOF
NC
NC
YUV SW
NC
BLK
NC
V STP
NC
GND
+9V-1
CONVER
TEXT RESET
HD
SYNC VCD
WOOFER SW
MUTE
GND
+5V-1
RESET
POWER1
SCART MUTE
POWER2
E3 DET
AFT IN
TO V/C/D
TO V/C/D
TO MICRO
D441
MTZJ9.1C
AFC
R445
1R6.8K
R446
1R6.8K
R405
1R5.6K
C493
M0.121
Q420
2SC3852
R424
1/2R0.33
+9V-1
9.5
12.4
R426
820
R425
1/2R330
10.1
R428
560
7.8
Q421
2SC1740S
7.2
C420
16V100μ
R427
4.3K
D427
MTZJ7.5A
orRD7.5BSB
+12V-1
G487
SHORT
D487
BYD33J
14:9
ABL
16:9
R294
OPEN
R293
33K
R295
OPEN
Q292
OPEN
R292
10K
R296
OPEN
R291
12K
Q291
2SC2482
R298
9.1KG
R297
1K
D429
MTZJ30C
R299
10KG
R372
4.7K

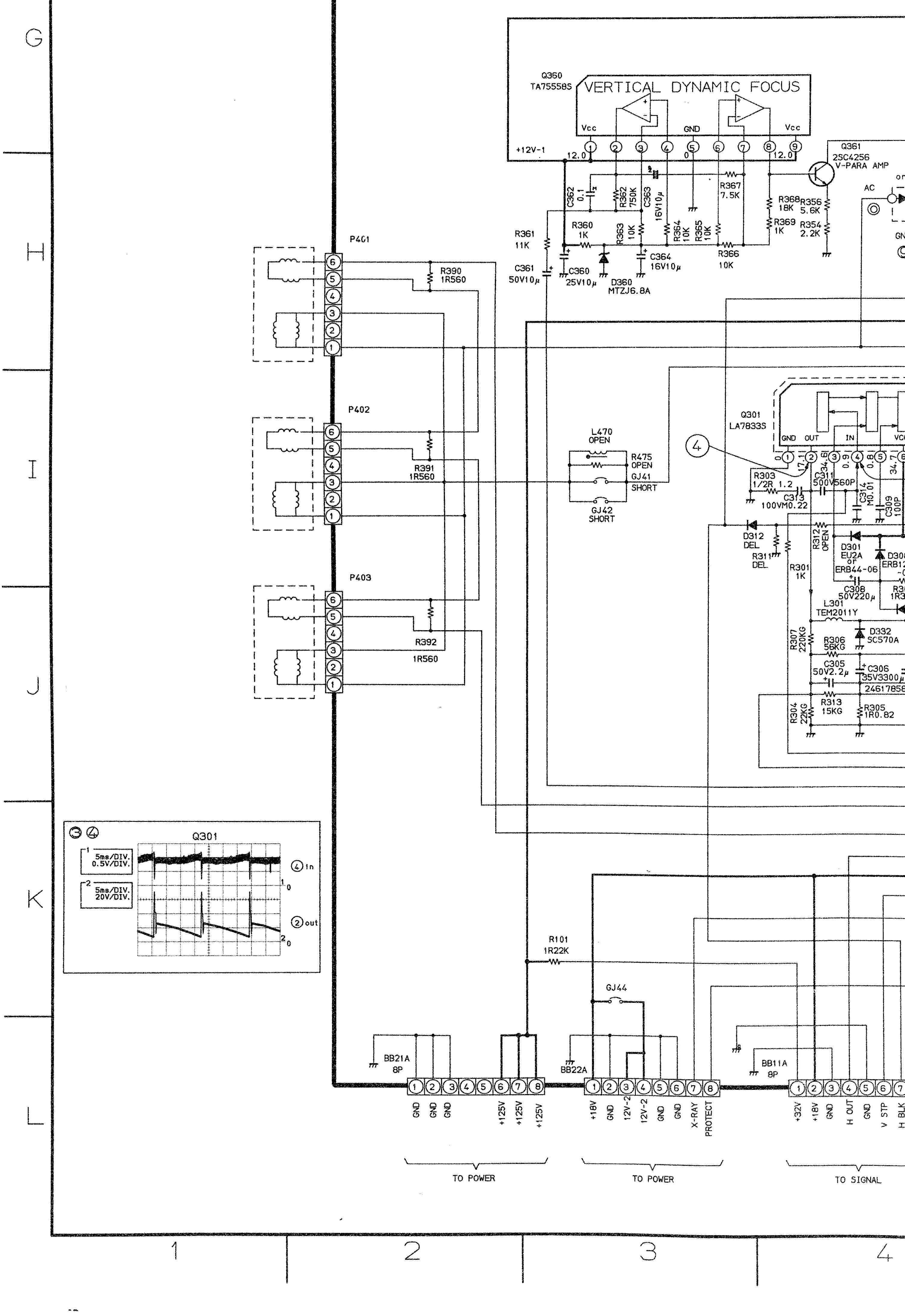


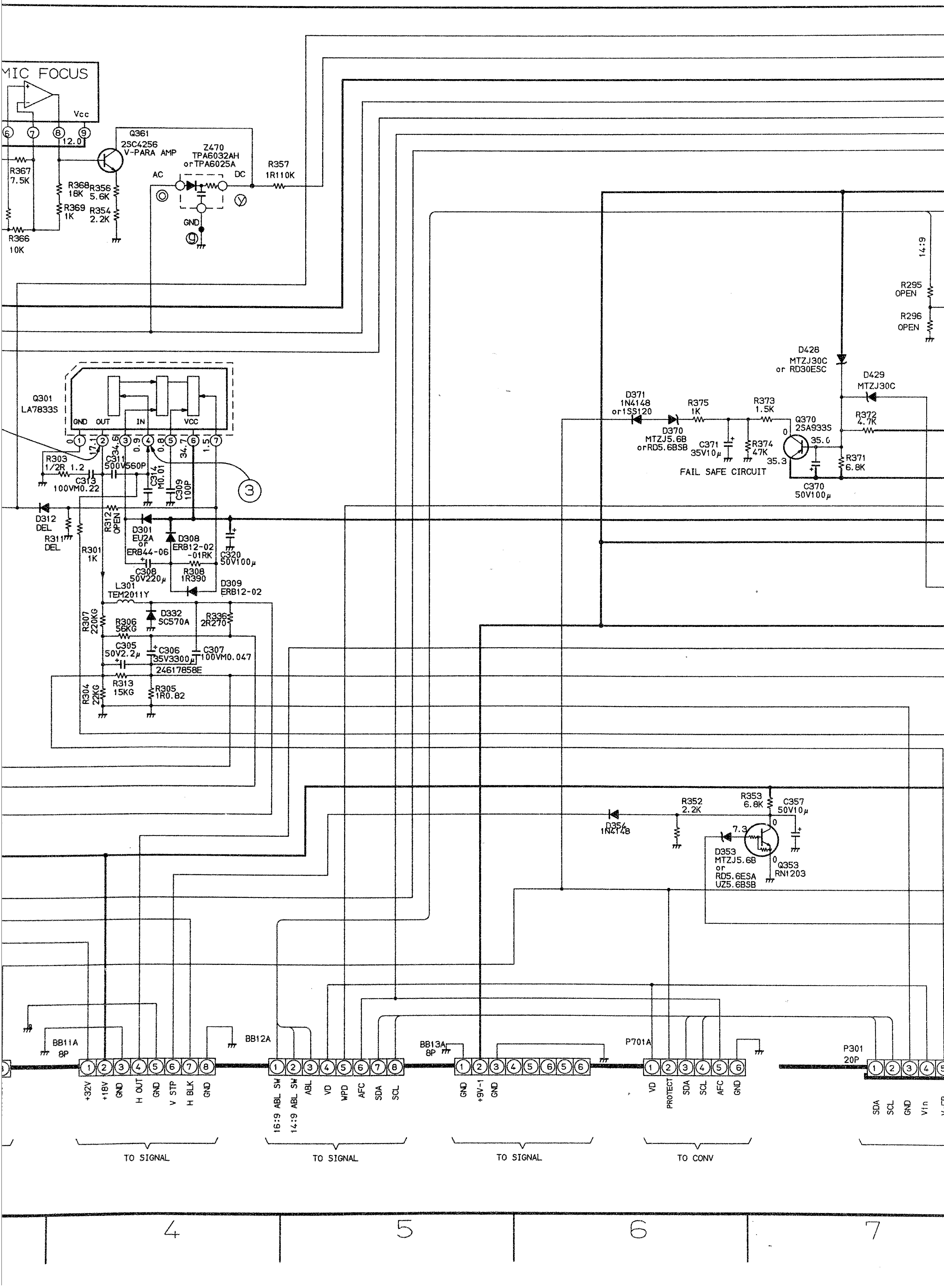
GJ84
SHORT
A
R8304
OPEN
R8303
OPEN
5.0
0
Q832
P005PD11
C8302
50V10μ
9V-2
9V-1
GJ85 SHORT
D VD
D385
1N4148
R387
10K
R386 4.7K
PA10A
AA
AB
AC
C
D
CT
CS
CR
CQ
CP
CO
CN
CM
CL
CK
CJ
CI
CH
CG
CF
CE
CD
CC
CB
CA
SYNC VCD
WOOFER SW
MUTE
GND
+5V-1
RESET
POWER1
SCART MUTE
POWER2
E3 DET
AFT IN
OSD Ys
OSD B
OSD G
OSD R
OSD Ym
GND
SDA1
SCL1
RGB DIS
TO MICRO
DY
DX
DW
DV
DU
DT
DS
DR
DQ
DP
DO
DN
DM
DL
DK
DJ
DI
DH
DG
DF
DE
DD
DC
DB
DA
GND
SCL2
SDA2
I2C STOP
CONVER MUTE
GND
EXT SP SW
16:9ABL SW
V-BLK
SGV
SGV GND
SYNC AV
GND(SYNC)
RGB DET
nexTView
SYNC SW
VD
GND
+5V-2
TOF
YUV SW
GND
SW1
SW0
EPG POWER
PA01A
25P
TO MICRO
BB13B
8P
31
32
33
34
35
36
37
GND
+9V-1
GND
TO DEF

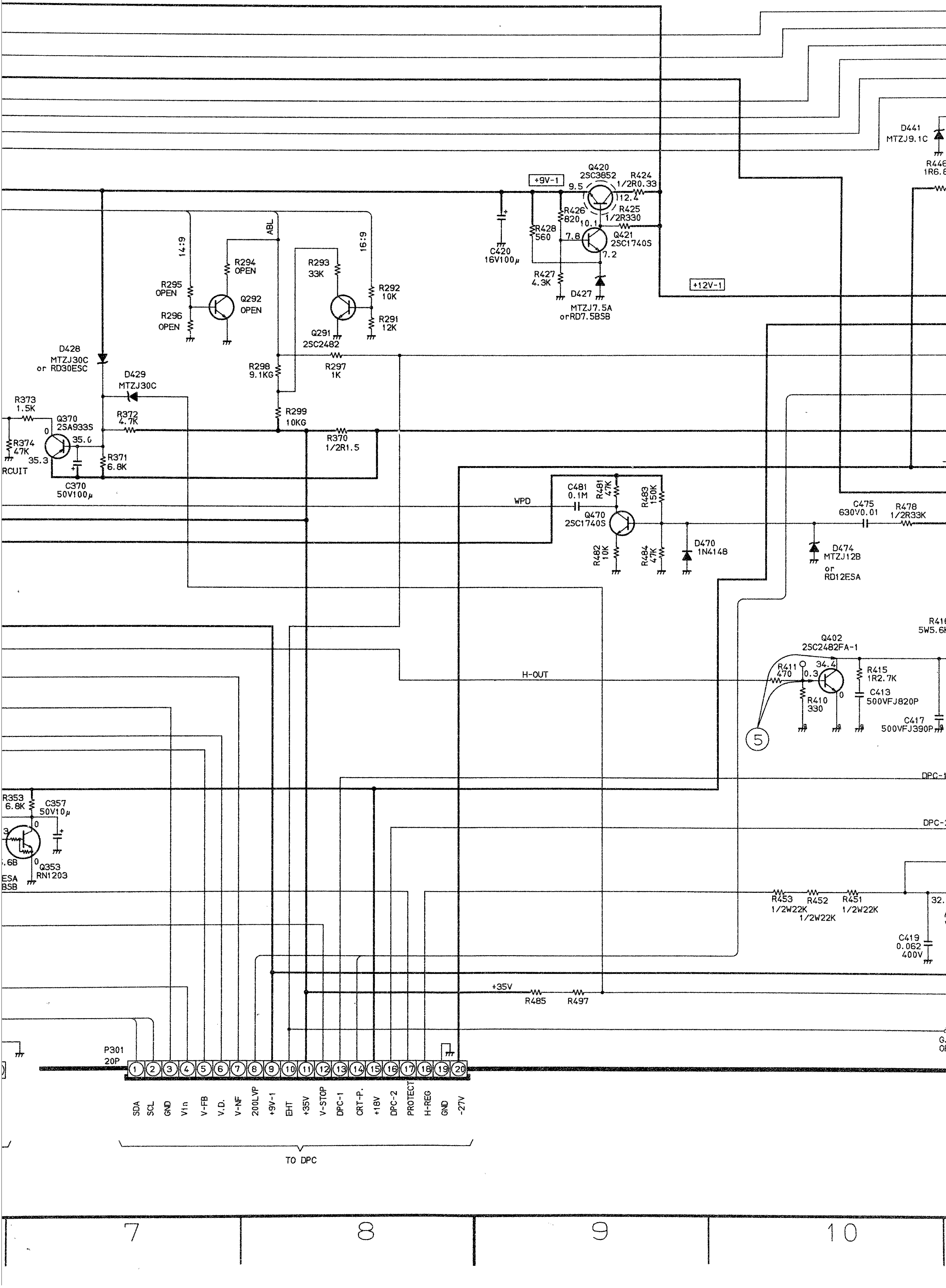


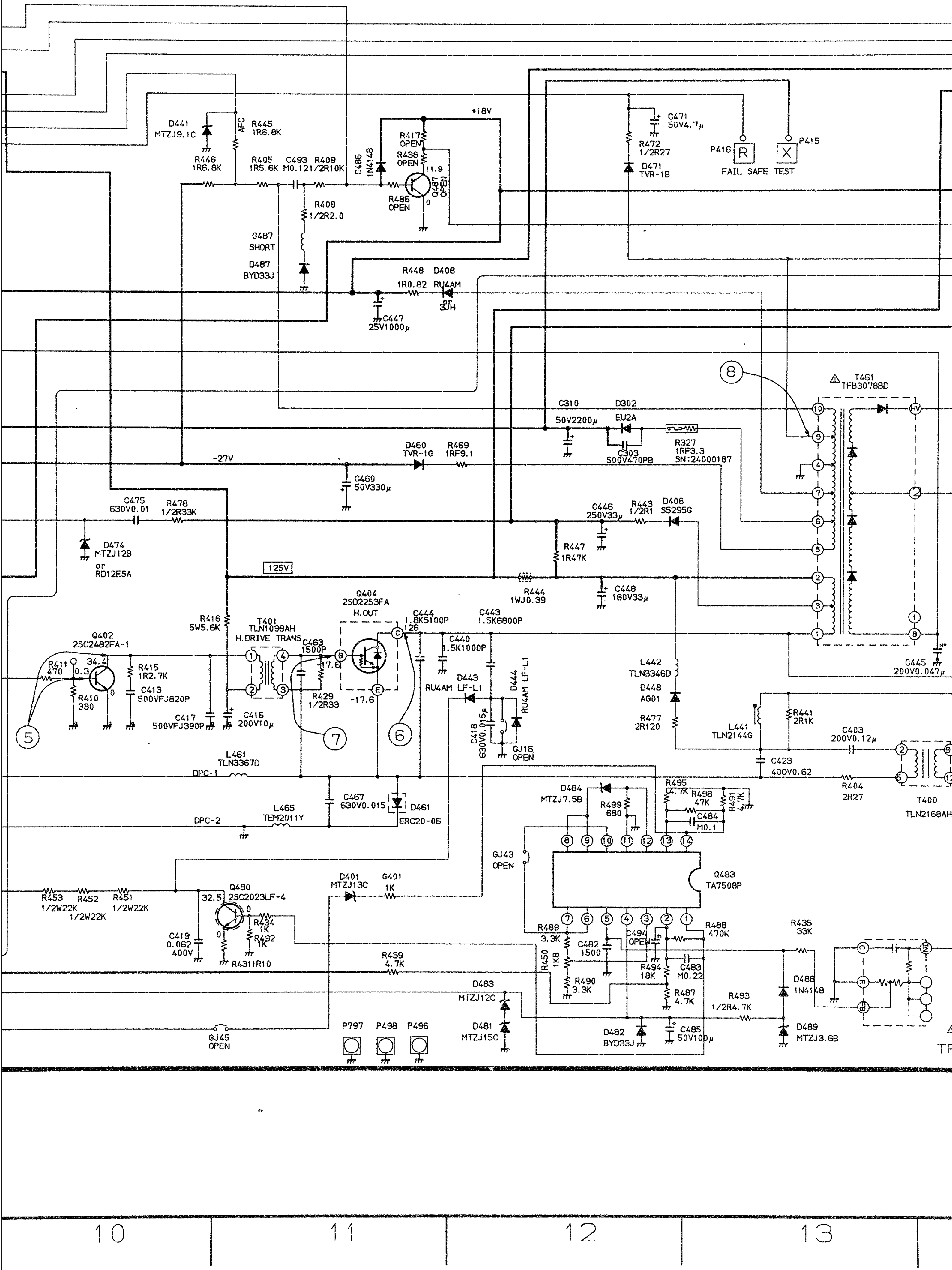
D441
MTZJ9.1C
AFC
R445
1R6.8K
R446
1R6.8K
R405
1R5.6K
C493
M0.121/2R10K
R409
R408
1/2R2.0
G487
SHORT
D487
BYD33J
D486
1N4148
+18V
R417
OPEN
R438
OPEN
11.9
R486
OPEN
Q487
OPEN
0
R448
1R0.82
D408
RU4AM
3μH
C447
25V1000μ
C471
50V4.7μ
R472
1/2R27
D471
TVR-1B
P416
R
X
P415
FAIL SAFE TEST
R439
1/4W
8
T461
TFB3078BD
10
HV
C310
50V2200μ
D302
EU2A

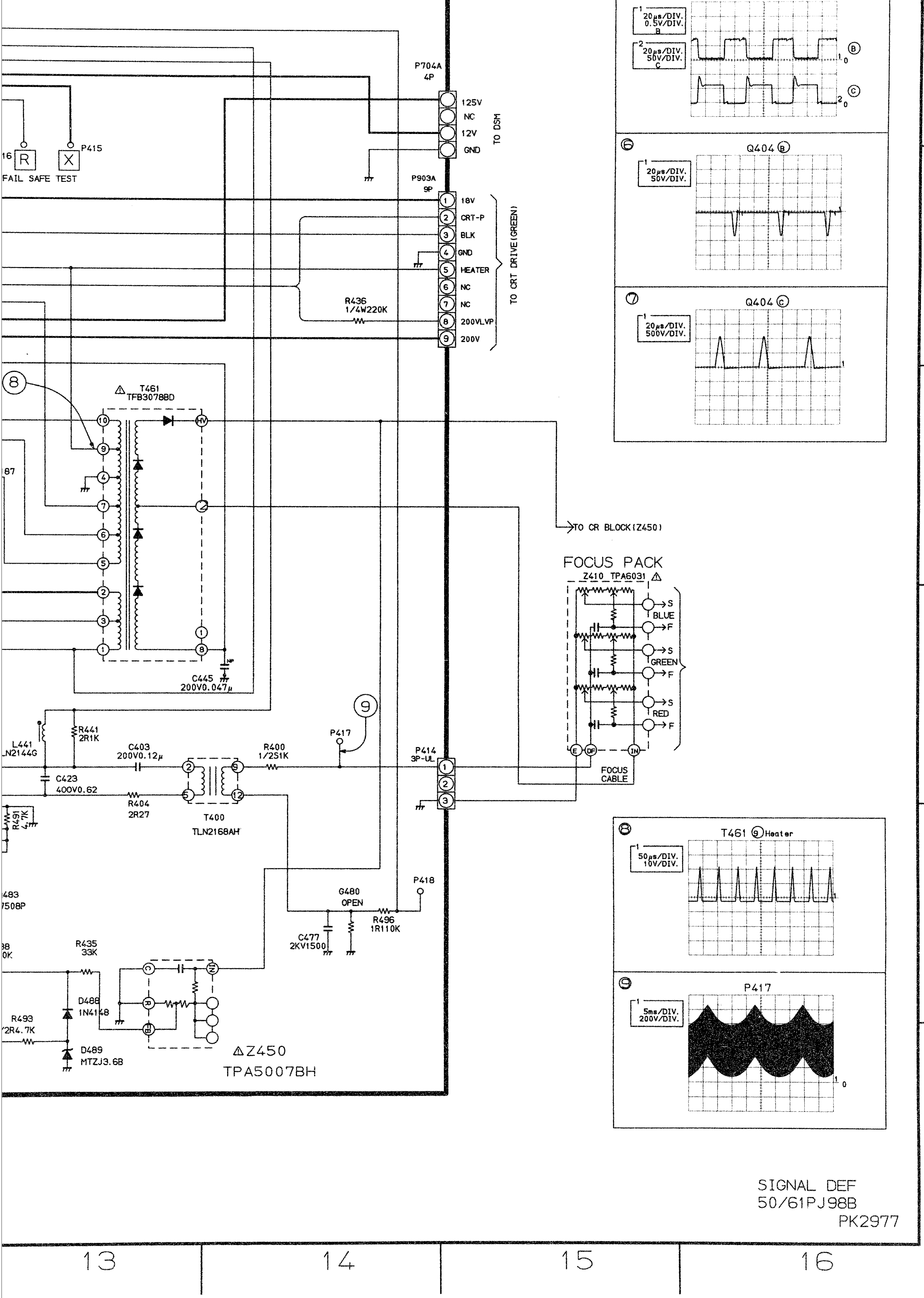

ERB12-01
C8302
50V10μ
Q832
P005PD11
RR71
3.3K
DR61
1N4148
QR37
2SA1015Y
RR66
100
RR67
220
RR65
1K
QR36
2SC1815Y
RR63
3.3K
RR64
1.5K
RR72
3.3K
QR39
2SA1015Y
RR82
100
DR62
1N4148
RR81
220
RR70
1K
QR38
2SC1815Y
RR68
3.3K
RR69
1.5K
9V-1
RR73
3.3K
QR41
2SA1015Y
RR84
100
DR63
1N4148
RR83
220
RR85
1K
QR40
2SC1815Y
RR87
3.3K
RR86
1.5K
QR35
2SC1815Y
RR88
100
RR62
1K
RR61
OPEN
GJ85 SHORT
+9V-1
P861B
CONVER G
GND
CONVER R
CONVER B
GND
CONVER Ys
CONVER MUTE
I2C STP
P702A
8P
TO CONV.
POWER1
RESET
+5V-1
GND
H Vcc
P804A
TO POWER
D462
1N4148
R462
1K
R386 4.7K
PA10A
AA
AB
AC
+5V-2
TOF
YUV SW
GND
SW1
SW0
EPG POWER
BB13B
8P
GND
+9V-1
GND
BB12B
8P
16:9 ABL SW
14:9 ABL SW
ABL
VD
WPD
AFC
SDA2
SCL2
BB11B
8P
+32V
+18V
GND
H OUT
GND
V STP
H BLK
GND
TO DEF
TO DEF
TO DEF
P704A
4P
125V
NC
12V
GND
TO DSM
P415
P903A
9P
18V
CRT-P
BLK
GND
HEATER
NC
NC
200VLVP
200V
TO CRT DRIVE(GREEN)
R436
1/4W220K
T461
TFB3078BD
⑤
Q402
20μs/DIV.
0.5V/DIV.
B
20μs/DIV.
50V/DIV.
C
⑥
Q404 Ⓑ
20μs/DIV.
50V/DIV.
⑦
Q404 Ⓒ
20μs/DIV.
500V/DIV.
C
D
E
F
G
H


G
H
I
J
K
L
1
2
3
4
Q360
TA75558S
VERTICAL DYNAMIC FOCUS
Vcc
GND
Vcc
+12V-1
12.0
0
12.0
Q361
2SC4256
V-PARA AMP
AC
C362 0.1
R362 750K
C363 16V10μ
R367 7.5K
R368 18K
R356 5.6K
R369 1K
R354 2.2K
R361 11K
R360 1K
R363 10K
R364 10K
R365 10K
R366 10K
C361 50V10μ
C360 25V10μ
C364 16V10μ
D360 MTZJ6.8A
P401
R390 1R560
P402
R391 1R560
P403
R392 1R560
L470 OPEN
R475 OPEN
GJ41 SHORT
GJ42 SHORT
Q301
LA7833S
GND
OUT
IN
VCC
④
0
17.1
34.6
0.9
0.8
34.7
R303 1/2R 1.2
C311 500V560P
C313 100VM0.22
C314 M0.01
C309 100P
D312 DEL
R311 DEL
R312 OPEN
D301 EU2A or ERB44-06
R301 1K
C308 50V220μ
L301 TEM2011Y
D332 SC570A
R307 220KG
R306 56KG
C305 50V2.2μ
C306 35V3300μ
24617856
R304 22KG
R313 15KG
R305 1R0.82
③④
Q301
5ms/DIV. 0.5V/DIV.
5ms/DIV. 20V/DIV.
④in
②out
R101 1R22K
GJ44
BB21A 8P
BB22A
BB11A 8P
GND
GND
GND
+125V
+125V
+125V
+18V
GND
12V-2
12V-2
GND
GND
X-RAY
PROTECT
+32V
+18V
GND
H OUT
GND
V STP
H BLK
TO POWER
TO POWER
TO SIGNAL


MIC FOCUS
Vcc
12.0
Q361
2SC4256
V-PARA AMP
Z470
TPA6032AH
or TPA6025A
AC
DC
GND
R357
1R110K
R367
7.5K
R368 18K
R356 5.6K
R369 1K
R354 2.2K
R366
10K
14:9
R295
OPEN
R296
OPEN
D428
MTZJ30C
or RD30ESC
D429
MTZJ30C
D371
1N4148
or 1SS120
R375
1K
R373
1.5K
Q370
2SA933S
R372
4.7K
D370
MTZJ5.6B
or RD5.6BSB
C371
35V10µ
R374
47K
35.0
35.3
R371
6.8K
FAIL SAFE CIRCUIT
C370
50V100µ
Q301
LA7833S
GND
OUT
IN
VCC
0
17.1
34.6
0.9
0.8
34.7
1.5
R303
1/2R 1.2
C311
500V560P
C313
100VM0.22
C314
M0.01
C309
100P
3
D312
DEL
R311
DEL
R312
OPEN
D301
EU2A
or
ERB44-06
D308
ERB12-02
-01RK
C320
50V100µ
R301
1K
C308
50V220µ
R308
1R390
D309
ERB12-02
L301
TEM2011Y
R307
220KG
R306
56KG
D332
SC570A
R336
2R270
C305
50V2.2µ
C306
35V3300µ
C307
100VM0.047
24617858E
R304
22KG
R313
15KG
R305
1R0.82
R352
2.2K
R353
6.8K
C357
50V10µ
D354
1N4148
7.3
0
D353
MTZJ5.6B
or
RD5.6ESA
UZ5.6BSB
Q353
RN1203
BB11A
8P
+32V
+18V
GND
H OUT
GND
V STP
H BLK
GND
TO SIGNAL
BB12A
16:9 ABL SW
14:9 ABL SW
ABL
VD
WPD
AFC
SDA
SCL
TO SIGNAL
BB13A
8P
GND
+9V-1
GND
TO SIGNAL
P701A
VD
PROTECT
SDA
SCL
AFC
GND
TO CONV
P301
20P
SDA
SCL
GND
Vin
4
5
6
7


Q420
2SC3852
R424
1/2R0.33
+9V-1
9.5
12.4
R426
820
R425
1/2R330
10.1
R428
560
7.8
Q421
2SC1740S
7.2
C420
16V100μ
R427
4.3K
D427
MTZJ7.5A
orRD7.5BSB
+12V-1
D441
MTZJ9.1C
R446
1R6.8
ABL
14:9
16:9
R294
OPEN
R293
33K
R295
OPEN
Q292
OPEN
R292
10K
R296
OPEN
R291
12K
Q291
2SC2482
D428
MTZJ30C
or RD30ESC
R298
9.1KG
R297
1K
D429
MTZJ30C
R373
1.5K
Q370
2SA933S
R372
4.7K
R299
10KG
0
35.0
R370
1/2R1.5
R374
47K
35.3
R371
6.8K
RCUIT
C370
50V100μ
WPD
C481
0.1M
R481
47K
R483
150K
Q470
2SC1740S
C475
630V0.01
R478
1/2R33K
R482
10K
R484
47K
D470
1N4148
D474
MTZJ12B
or
RD12ESA
R41
5W5.6
Q402
2SC2482FA-1
H-OUT
R411
470
34.4
0.3
R415
1R2.7K
R410
330
0
C413
500VFJ820P
C417
500VFJ390P
5
DPC-1
R353
6.8K
C357
50V10μ
0
Q353
RN1203
.6B
ESA
BSB
R453
1/2W22K
R452
1/2W22K
R451
1/2W22K
32.
C419
0.062
400V
+35V
R485
R497
P301
20P
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
SDA
SCL
GND
Vin
V-FB
V.D.
V-NF
200LVP
+9V-1
EHT
+35V
V-STOP
DPC-1
CRT-P.
+18V
DPC-2
PROTECT
H-REG
GND
-27V
TO DPC
7
8
9
10


D441
MTZJ9.1C
AFC
R445
1R6.8K
R446
1R6.8K
R405
1R5.6K
C493
M0.121/2R10K
R409
+18V
R417
OPEN
R438
OPEN
D486
1N4148
11.9
Q487
OPEN
R486
OPEN
0
R408
1/2R2.0
G487
SHORT
D487
BYD33J
R448
1R0.82
D408
RU4AM
or
3JH
C447
25V1000μ
C471
50V4.7μ
R472
1/2R27
D471
TVR-1B
P416
R
P415
X
FAIL SAFE TEST
8
T461
TFB3078BD
C310
50V2200μ
D302
EU2A
C303
500V470PB
R327
1RF3.3
SN:24000187
HV
-27V
D460
TVR-1G
R469
1RF9.1
C460
50V330μ
C475
630V0.01
R478
1/2R33K
D474
MTZJ12B
or
RD12ESA
C446
250V33μ
R443
1/2R1
D406
S5295G
R447
1R47K
125V
R444
1WJ0.39
C448
160V33μ
R416
5W5.6K
Q402
2SC2482FA-1
R411
470
34.4
0.3
0
R410
330
R415
1R2.7K
C413
500VFJ820P
T401
TLN1098AH
H.DRIVE TRANS
C463
1500P
17.6
R429
1/2R33
C417
500VFJ390P
C416
200V10μ
Q404
2SD2253FA
H.OUT
C444
1.8K5100P
126
C443
1.5K6800P
C440
1.5K1000P
-17.6
D443
RU4AM LF-L1
D444
RU4AM LF-L1
C418
630V0.015μ
GJ16
OPEN
L442
TLN3346D
D448
AG01
R477
2R120
L441
TLN2144G
R441
2R1K
C403
200V0.12μ
C423
400V0.62
R404
2R27
T400
TLN2168AH
C445
200V0.047μ
NP
5
7
6
L461
TLN3367D
DPC-1
L465
TEM2011Y
DPC-2
C467
630V0.015
D461
ERC20-06
D484
MTZJ7.5B
R499
680
R495
4.7K
R498
47K
R491
4.7K
C484
M0.1
GJ43
OPEN
Q483
TA7508P
R453
1/2W22K
R452
1/2W22K
R451
1/2W22K
Q480
2SC2023LF-4
32.5
0
R434
1K
R492
1K
C419
0.062
400V
R4311R10
D401
MTZJ13C
G401
1K
R439
4.7K
R489
3.3K
C482
1500
C494
OPEN
R488
470K
R450
1KB
R490
3.3K
R494
18K
C483
M0.22
R487
4.7K
R435
33K
D488
1N4148
R493
1/2R4.7K
D483
MTZJ12C
D481
MTZJ15C
D482
BYD33J
C485
50V100μ
D489
MTZJ3.6B
GJ45
OPEN
P797
P498
P496
TF
10
11
12
13



P704A
4P
125V
NC
12V
GND
TO DSM
P415
16
R
X
FAIL SAFE TEST
P903A
9P
18V
CRT-P
BLK
GND
HEATER
NC
NC
200VLVP
200V
TO CRT DRIVE(GREEN)
R436
1/4W220K
⑧
△ T461
TFB3078BD
HV
87
C445
200V0.047μ
TO CR BLOCK(Z450)
FOCUS PACK
Z410 TPA6031 △
S
BLUE
F
S
GREEN
F
S
RED
F
E
DF
IN
FOCUS CABLE
⑨
P417
L441
N2144G
R441
2R1K
C403
200V0.12μ
R400
1/2S1K
P414
3P-UL
C423
400V0.62
R404
2R27
T400
TLN2168AH
R491
4.7K
483
7508P
G480
OPEN
P418
R496
1R110K
C477
2KV1500
R435
33K
D488
1N4148
R493
2R4.7K
D489
MTZJ3.6B
△Z450
TPA5007BH
20μs/DIV.
0.5V/DIV.
B
20μs/DIV.
50V/DIV.
C
Ⓑ
Ⓒ
⑥
Q404 Ⓑ
20μs/DIV.
50V/DIV.
⑦
Q404 Ⓒ
20μs/DIV.
500V/DIV.
⑧
T461 ⑨ Heater
50μs/DIV.
10V/DIV.
⑨
P417
5ms/DIV.
200V/DIV.
G
H
I
J
K
L
13
14
15
16

SIGNAL DEF
50/61PJ98B
PK2977

SCHEMATIC DIAGRAM MODEL : 50PJ98B (2/6)

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 3. Do not degrade the safety of the receiver through improper servicing.

030-9915

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position. Set other controls for best picture.

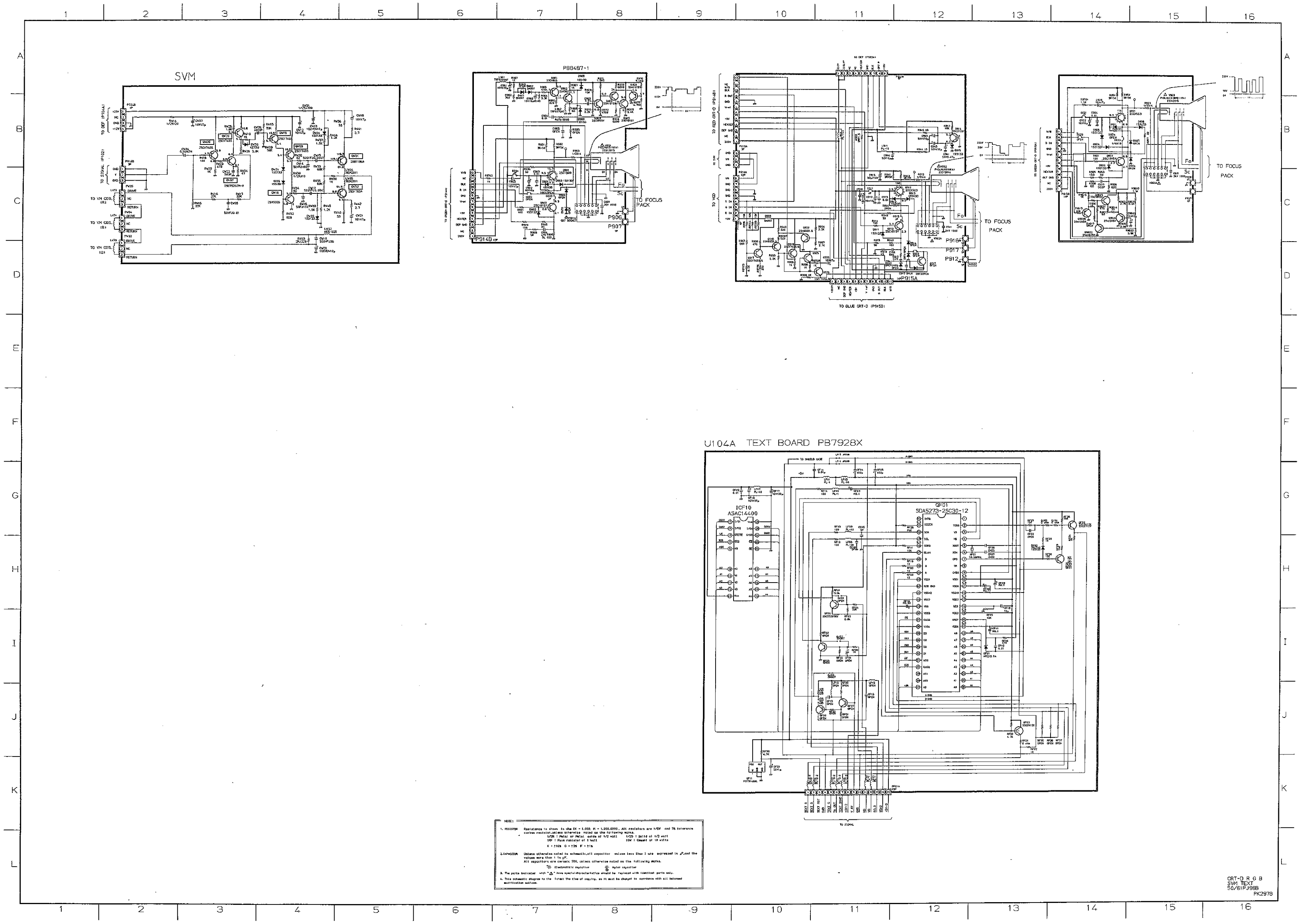
NOTES:

1. D.C. resistance value of a principal transformer is shown in this schematic diagram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

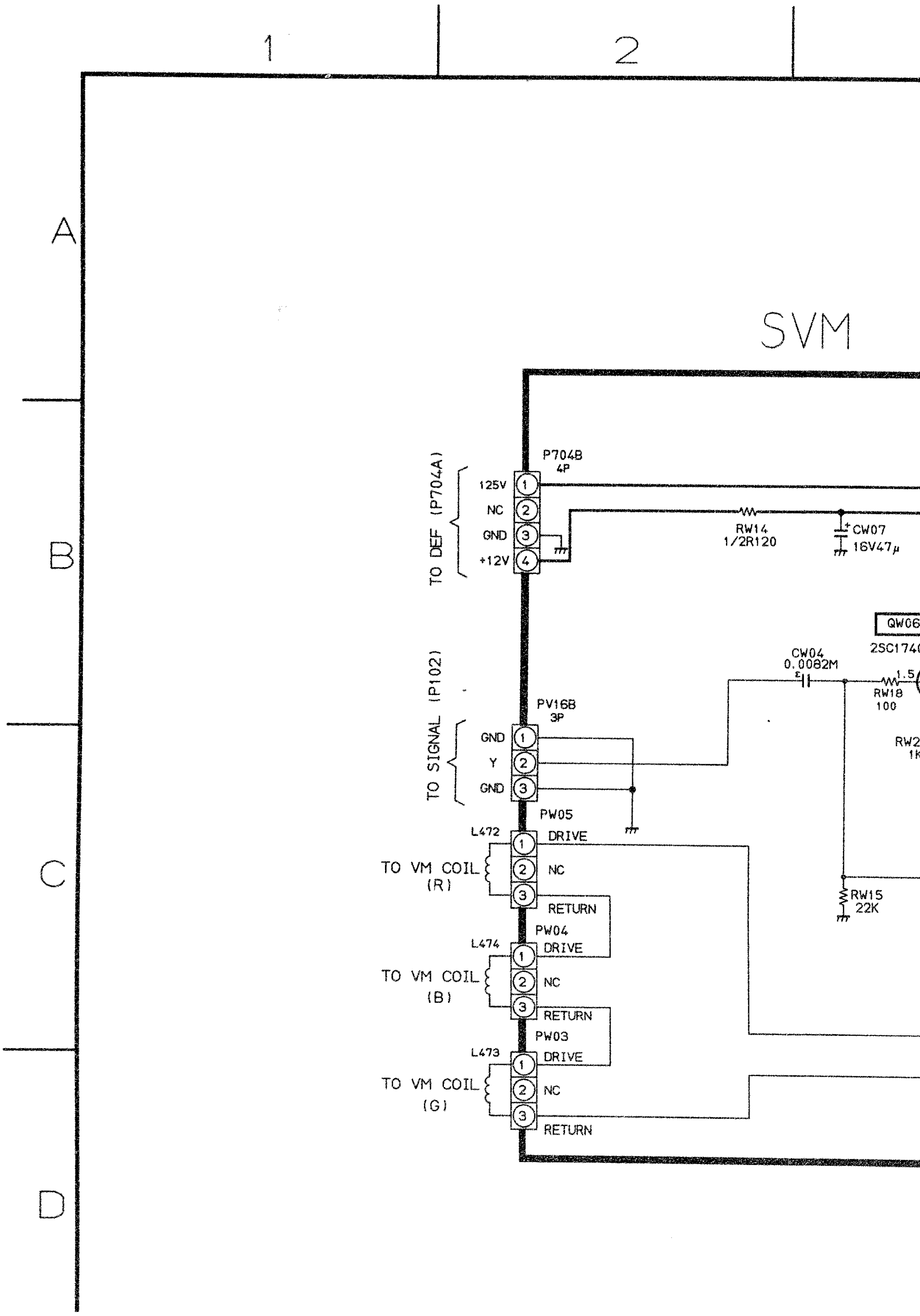
1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH, and the values less than 1 in H.


SVM
TO DEF (P702A)
TO SIGNAL (P1421)
TO VM COIL (R)
TO VM COIL (G)
TO VM COIL (B)
RETURN
PB8497-1
TO FOCUS PACK
P906
P907
P914B
TO RED CRT-D (P914B)
TO VIDEO
P916A
P917
P912
P915A
TO BLUE CRT-D (P915D)
TO GREEN CRT-D (P916A)
U104A TEXT BOARD PB7928X
ICF10
ASAC14400
QF01
SDA5273-2SC30-12
TO SHIELD CASE
+5V
TO SIGNAL
CRT-D R G B
SVM TEXT
50/61PJ98B
PK2978

SCHEMATIC DIAGRAM MODEL : 50PJ98B (2/6)

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate c
ponents which have special characteristics important for safety and should be replaced only with types ic
those in the original circuit or specified in the parts list. The mounting position of replacements is to be ide
with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTIC
3. Do not degrade the safety of the receiver through improper servicing.

030-9915

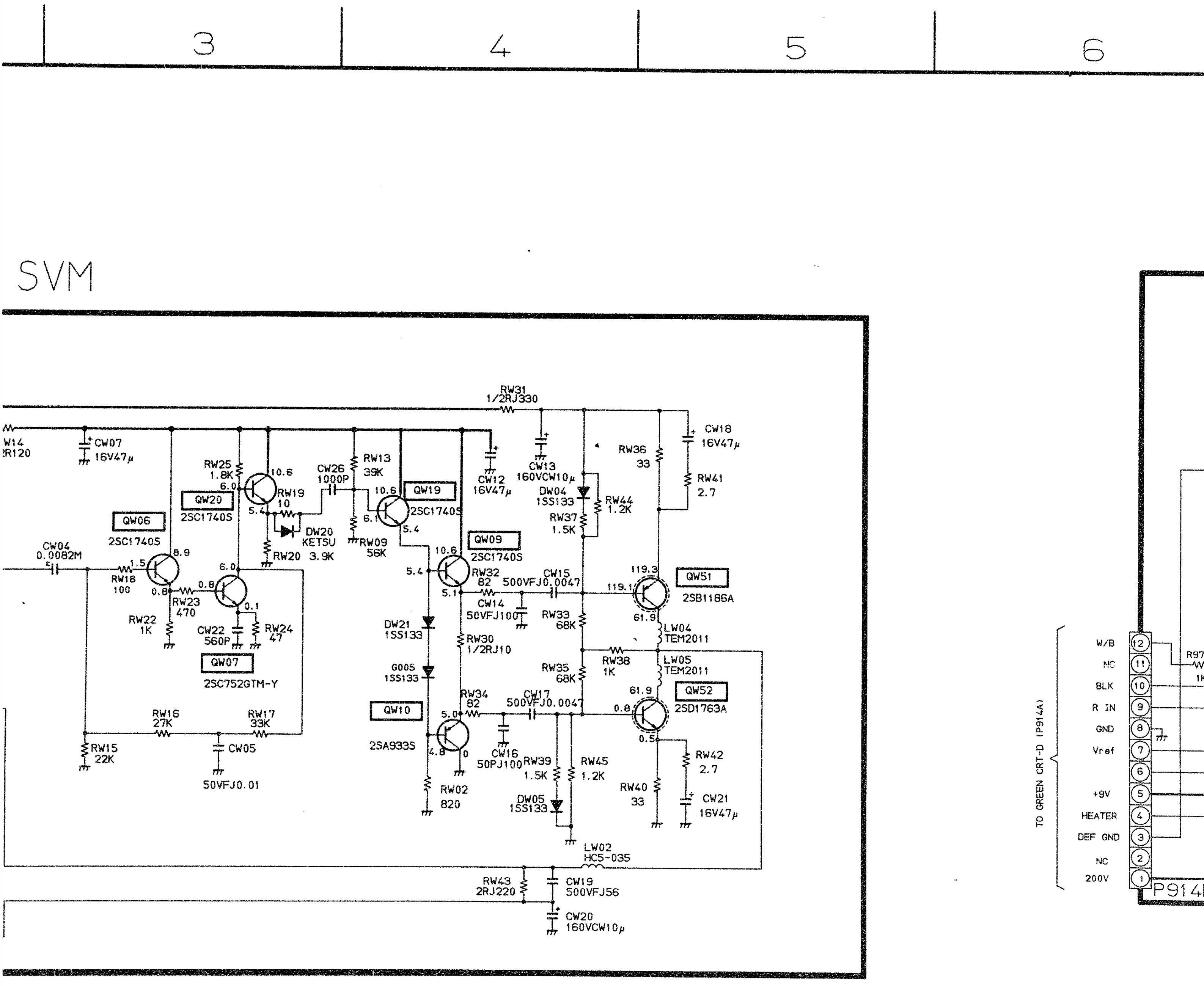

1
2
A
B
C
D
SVM
TO DEF (P704A)
P704B
4P
125V
NC
GND
+12V
RW14
1/2R120
CW07
16V47μ
QW06
2SC174
CW04
0.0082M
RW18
100
1.5
RW2
1K
TO SIGNAL (P102)
PV16B
3P
GND
Y
GND
PW05
L472
DRIVE
TO VM COIL (R)
NC
RETURN
RW15
22K
PW04
L474
DRIVE
TO VM COIL (B)
NC
RETURN
PW03
L473
DRIVE
TO VM COIL (G)
NC
RETURN

2/6)

st designate com-
/ with types identical to
nts is to be identical
FETY NOTICE on page

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line v
   volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capa
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid po
   BRIGHTNESS control is almost in maximum position. Set other contro
   picture.

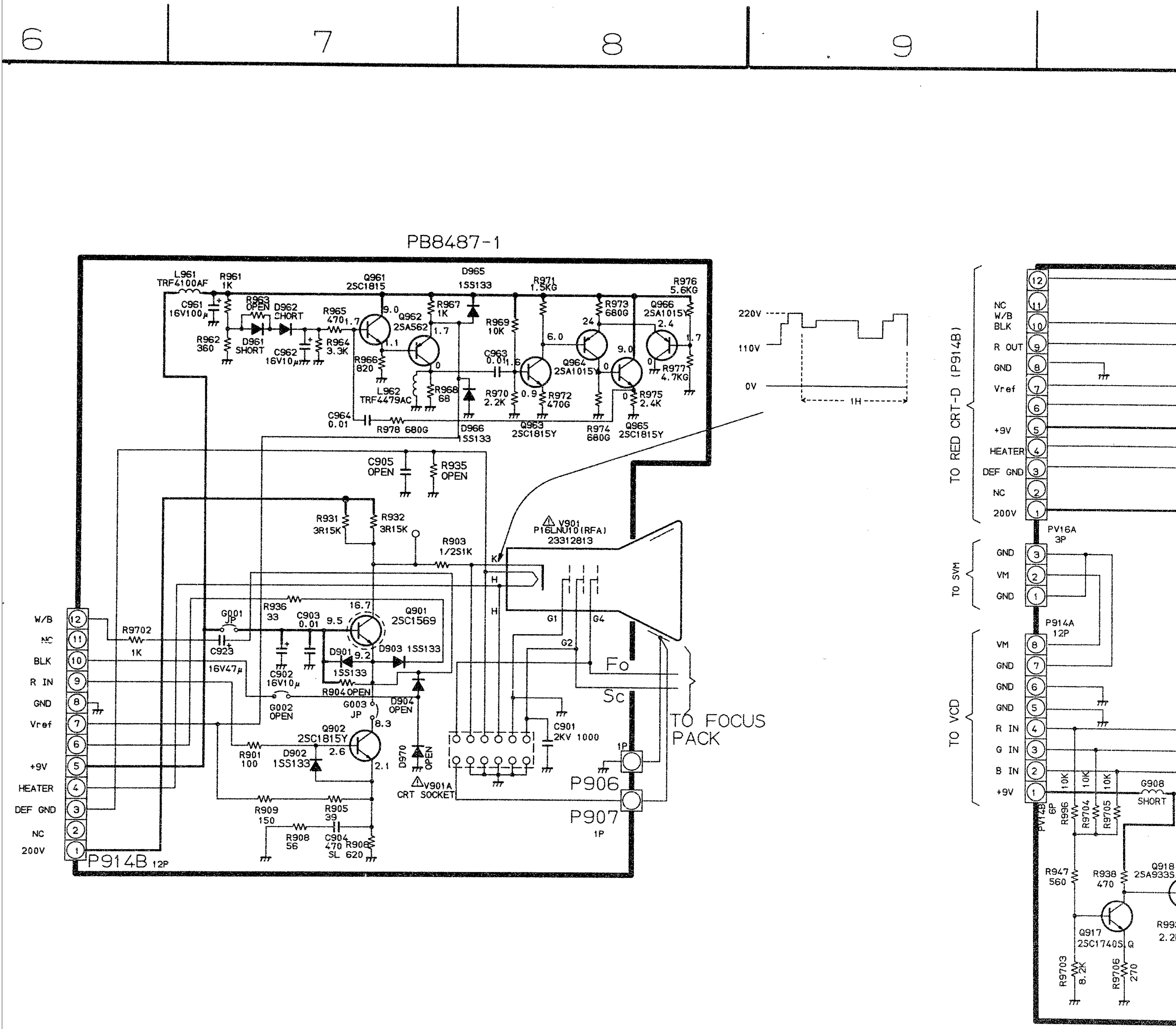

3
4
5
6
SVM
W14
2R120
CW07
16V47μ
RW25
1.8K
QW20
2SC1740S
10.6
6.0
5.4
RW19
10
DW20
KETSU
RW20 3.9K
CW26
1000P
RW13
39K
RW09
56K
QW19
2SC1740S
10.6
6.1
5.4
QW06
2SC1740S
CW04
0.0082M
RW18
100
1.5
8.9
0.8
RW22
1K
RW23
470
0.8
6.0
0.1
CW22
560P
RW24
47
QW07
2SC752GTM-Y
RW16
27K
RW17
33K
RW15
22K
CW05
50VFJ0.01
RW31
1/2RJ330
CW12
16V47μ
CW13
160VCW10μ
DW04
1SS133
RW44
1.2K
RW37
1.5K
RW36
33
CW18
16V47μ
RW41
2.7
QW09
2SC1740S
10.6
5.4
5.1
RW32
82
CW15
500VFJ0.0047
CW14
50VFJ100
RW33
68K
119.3
119.1
QW51
2SB1186A
61.9
LW04
TEM2011
DW21
1SS133
RW30
1/2RJ10
G005
1SS133
RW35
68K
RW38
1K
LW05
TEM2011
61.9
QW52
2SD1763A
0.8
0.5
QW10
2SA933S
RW34
82
5.0
4.8
0
CW17
500VFJ0.0047
CW16
50PJ100
RW39
1.5K
RW45
1.2K
DW05
1SS133
RW02
820
RW40
33
RW42
2.7
CW21
16V47μ
LW02
HC5-035
RW43
2RJ220
CW19
500VFJ56
CW20
160VCW10μ
TO GREEN CRT-D (P914A)
W/B
NC
BLK
R IN
GND
Vref
+9V
HEATER
DEF GND
NC
200V
12
11
10
9
8
7
6
5
4
3
2
1
R97
1K
P914

round, line voltage 220
%.
nd a low capacity probe.

e in mid position and
t other controls for best

NOTES:

1. D.C. resistance value of a principal transformer is shown
   gram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.



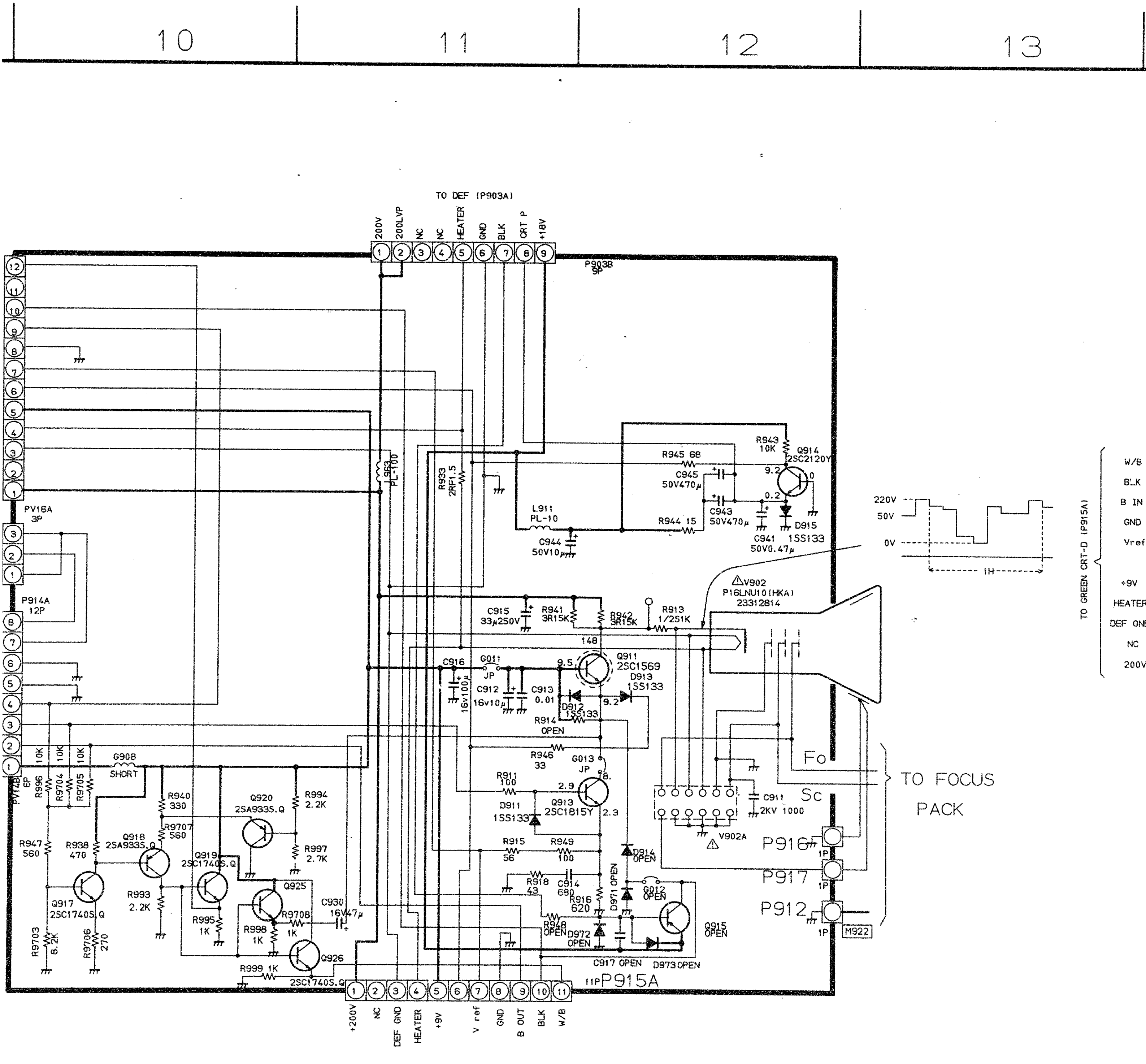
6
7
8
9
PB8487-1
L961 TRF4100AF
R961 1K
C961 16V100μ
R962 360
R963 OPEN
D962 SHORT
D961 SHORT
C962 16V10μ
R965 470
R964 3.3K
Q961 2SC1815
9.0
1.7
1.1
R966 820
Q962 2SA562
1.7
0
R967 1K
D965 1SS133
L962 TRF4479AC
R968 68
R969 10K
R971 1.5KG
C963 0.01
1.6
6.0
0.9
R970 2.2K
R972 470G
Q963 2SC1815Y
Q964 2SA1015Y
24
R973 680G
9.0
0
R974 680G
R975 2.4K
Q965 2SC1815Y
Q966 2SA1015Y
2.4
1.7
R976 5.6KG
R977 4.7KG
C964 0.01
R978 680G
D966 1SS133
C905 OPEN
R935 OPEN
R931 3R15K
R932 3R15K
R903 1/2S1K
⚠V901 P16LNU10(RFA) 23312813
K
H
H
G1
G4
G2
Fo
Sc
TO FOCUS PACK
220V
110V
0V
1H
W/B
NC
BLK
R IN
GND
Vref
+9V
HEATER
DEF GND
NC
200V
12
11
10
9
8
7
6
5
4
3
2
1
P914B 12P
R9702 1K
G001 JP
C923
16V47μ
R936 33
C903 0.01
9.5
16.7
Q901 2SC1569
9.2
D901 1SS133
D903 1SS133
C902 16V10μ
R904 OPEN
G002 OPEN
G003 JP
D904 OPEN
8.3
Q902 2SC1815Y
2.6
2.1
R901 100
D902 1SS133
D970 OPEN
⚠V901A CRT SOCKET
C901 2KV 1000
1P
P906
P907 1P
R909 150
R905 39
R908 56
C904 470 SL
R906 620
TO RED CRT-D (P914B)
NC
W/B
BLK
R OUT
GND
Vref
+9V
HEATER
DEF GND
NC
200V
PV16A 3P
TO SVM
GND
VM
GND
P914A 12P
TO VCD
VM
GND
GND
GND
R IN
G IN
B IN
+9V
PV14B 6P
R996 10K
R9704 10K
R9705 10K
G908 SHORT
R947 560
R938 470
Q918 2SA933S
Q917 2SC1740S,Q
R9703 8.2K
R9706 270
2.2

ner is shown in this schematic dia-
the circuit.
tice.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDU

1. Resistance is shown in ohm, k=1,000, M=1,000,0
2. Unless other wise noted in schematic, all capaci
sed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inducto
sed in μH, and the values less than 1 in H.



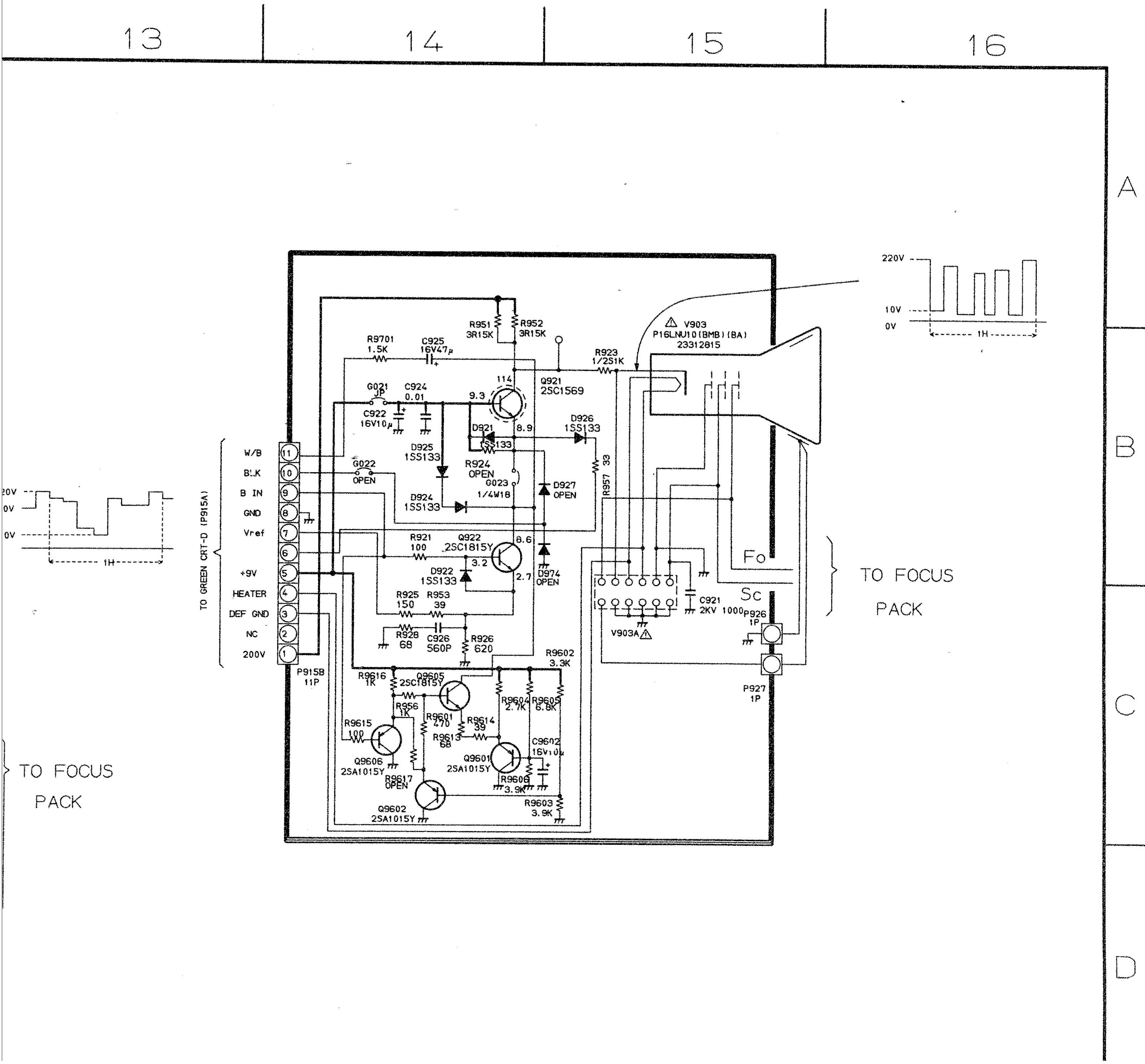
10
11
12
13
TO DEF (P903A)
200V
200LVP
NC
NC
HEATER
GND
BLK
CRT P
+18V
P903B
9P
PV16A
3P
P914A
12P
PV14B
6P
L963
PL-100
R933
2RF1.5
L911
PL-10
C944
50V10μ
R945 68
C945
50V470μ
R943
10K
Q914
2SC2120Y
9.2
0
0.2
R944 15
C943
50V470μ
C941
50V0.47μ
D915
1SS133
220V
50V
0V
1H
TO GREEN CRT-D (P915A)
W/B
BLK
B IN
GND
Vref
+9V
HEATER
DEF GND
NC
200V
V902
P16LNU10(HKA)
23312814
C915
33μ250V
R941
3R15K
R942
3R15K
R913
1/251K
148
Q911
2SC1569
9.5
D913
1SS133
9.2
C916
16v100μ
G011
JP
C912
16v10μ
C913
0.01
D912
1SS133
R914
OPEN
R946
33
G013
JP
8.
R911
100
2.9
Q913
2SC1815Y
2.3
D911
1SS133
R915
56
R949
100
R918
43
C914
680
R916
620
D971 OPEN
D914
OPEN
G012
OPEN
R948
OPEN
D972
OPEN
Q915
OPEN
C917 OPEN
D973 OPEN
11P P915A
+200V
NC
DEF GND
HEATER
+9V
V ref
GND
B OUT
BLK
W/B
C911
2KV 1000
V902A
Fo
Sc
TO FOCUS
PACK
P916
P917
P912
1P
M922
10K
10K
10K
G908
SHORT
R996
R9704
R9705
R940
330
R994
2.2K
Q920
2SA933S.Q
R9707
560
R997
2.7K
Q918
2SA933S.Q
R947
560
R938
470
Q919
2SC1740S.Q
R993
2.2K
Q917
2SC1740S.Q
R995
1K
Q925
R998
1K
R9708
1K
C930
16V47μ
R9703
8.2K
R9706
270
R999 1K
Q926
2SC1740S.Q

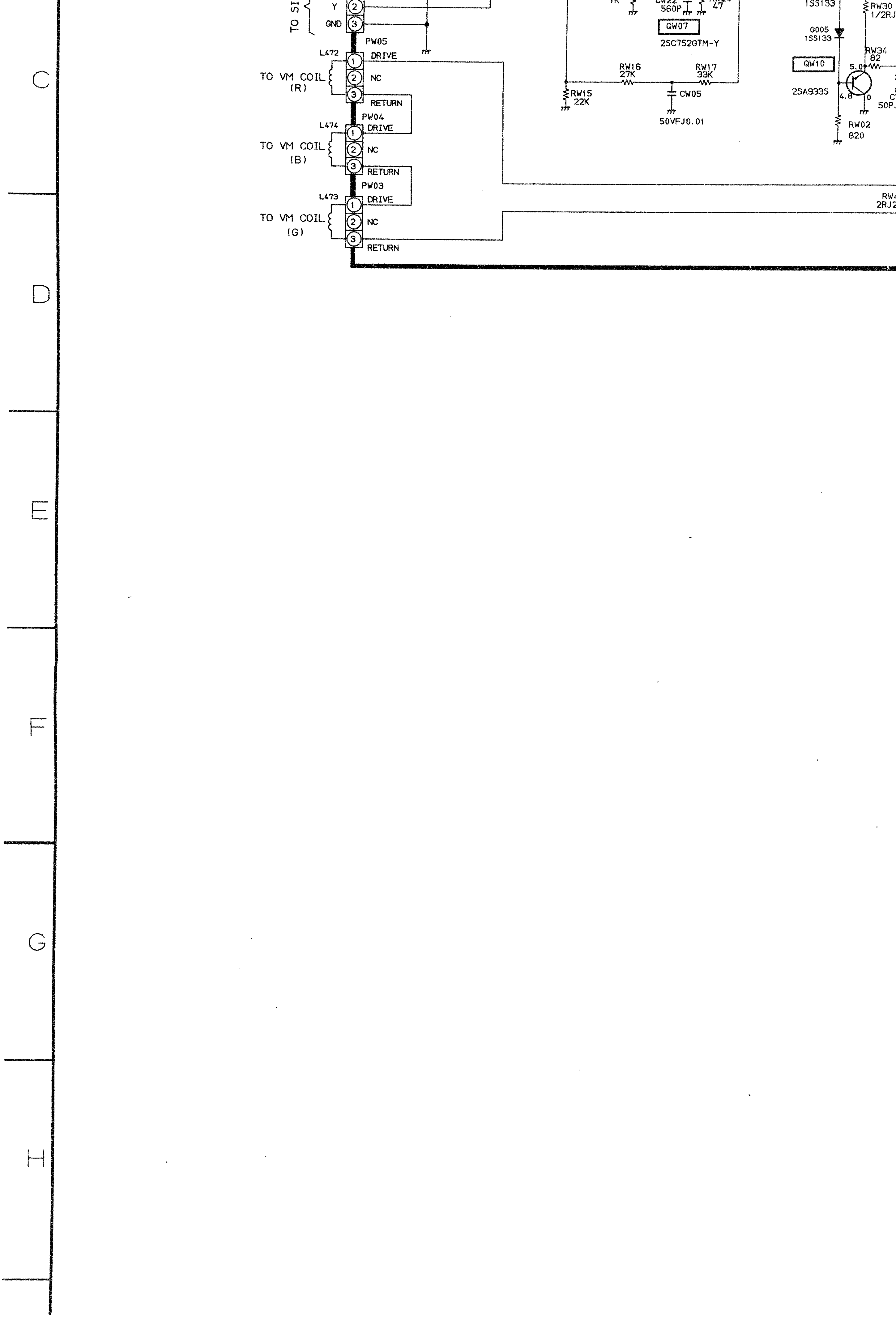
CAPACITOR and INDUCTOR

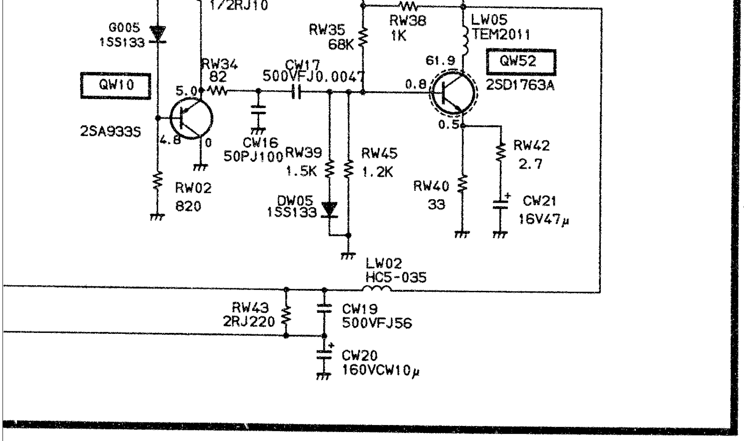
hm, k=1,000, M=1,000,000

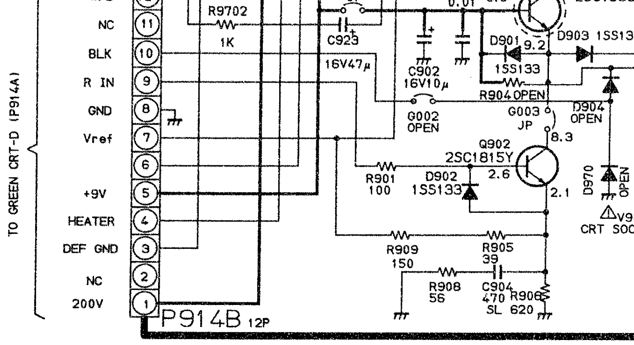
in schematic, all capacitor values less than 1 are expres-
more than 1 in pF.

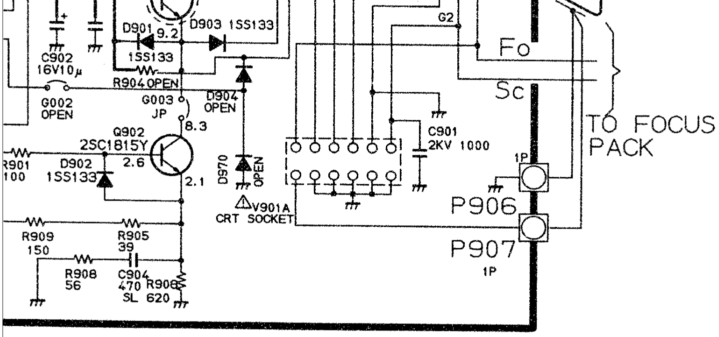
in schematic, all inductor values more than 1 are expres-
s less than 1 in H.

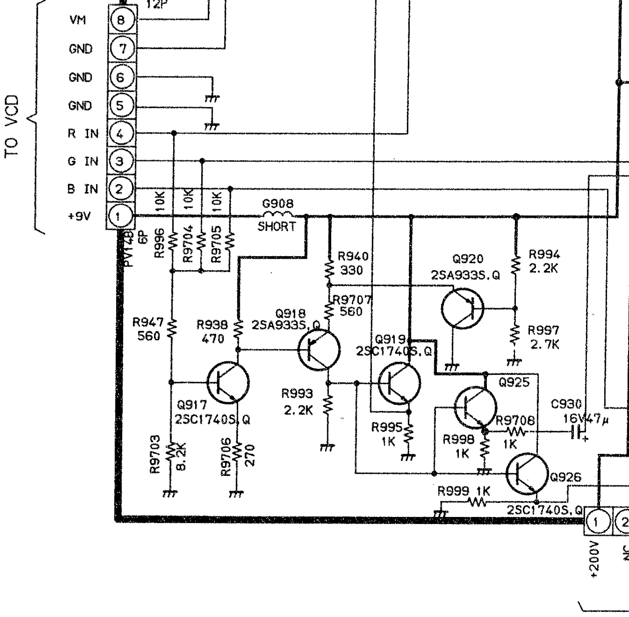

13
14
15
16
A
B
C
D
220V
10V
0V
1H
V903
P16LNU10(BMB)(BA)
23312815
R951
3R15K
R952
3R15K
R9701
1.5K
C925
16V47μ
R923
1/2S1K
Q921
2SC1569
114
9.3
8.9
G021
JP
C924
0.01
C922
16V10μ
D921
1SS133
D926
1SS133
D925
1SS133
R924
OPEN
G023
1/4W18
D927
OPEN
R957 33
D924
1SS133
G022
OPEN
W/B
BLK
B IN
GND
Vref
+9V
HEATER
DEF GND
NC
200V
TO GREEN CRT-D (P915A)
11
10
9
8
7
6
5
4
3
2
1
R921
100
Q922
2SC1815Y
8.6
3.2
2.7
D922
1SS133
D974
OPEN
R925
150
R953
39
R928
68
C926
560P
R926
620
R9602
3.3K
R9616
1K
Q9605
2SC1815Y
R956
1K
R9601
470
R9614
39
R9604
2.7K
R9605
6.8K
R9615
100
R9613
68
C9602
16V10μ
Q9606
2SA1015Y
Q9601
2SA1015Y
R9617
OPEN
R9606
3.9K
Q9602
2SA1015Y
R9603
3.9K
P915B
11P
Fo
Sc
C921
2KV 1000P
V903A
P926
1P
P927
1P
TO FOCUS PACK
TO FOCUS PACK
20V
0V
0V
1H


C
D
E
F
G
H
TO SI
Y
GND
2
3
PW05
L472
1
DRIVE
TO VM COIL
(R)
2
NC
3
RETURN
PW04
L474
1
DRIVE
TO VM COIL
(B)
2
NC
3
RETURN
PW03
L473
1
DRIVE
TO VM COIL
(G)
2
NC
3
RETURN
1K
CW22
560P
RW24
47
QW07
2SC752GTM-Y
RW16
27K
RW17
33K
RW15
22K
CW05
50VFJ0.01
1SS133
G005
1SS133
RW30
1/2RJ
RW34
82
QW10
5.0
2SA933S
4.8
0
50PJ
RW02
820
RW4
2RJ2

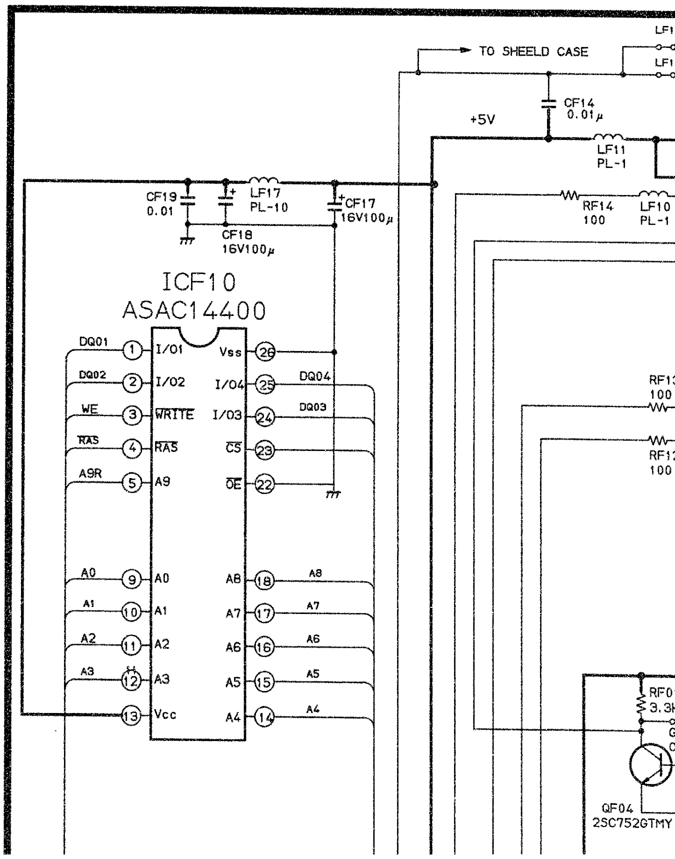

1/2RJ10
G005
1SS133
QW10
2SA933S
RW34
82
5.0
4.8
0
RW02
820
CW16
50PJ100
CW17
500VFJ0.0047
RW35
68K
RW38
1K
RW39
1.5K
RW45
1.2K
DW05
1SS133
LW05
TEM2011
61.9
0.8
0.5
QW52
2SD1763A
RW42
2.7
RW40
33
CW21
16V47μ
LW02
HC5-035
RW43
2RJ220
CW19
500VFJ56
CW20
160VCW10μ

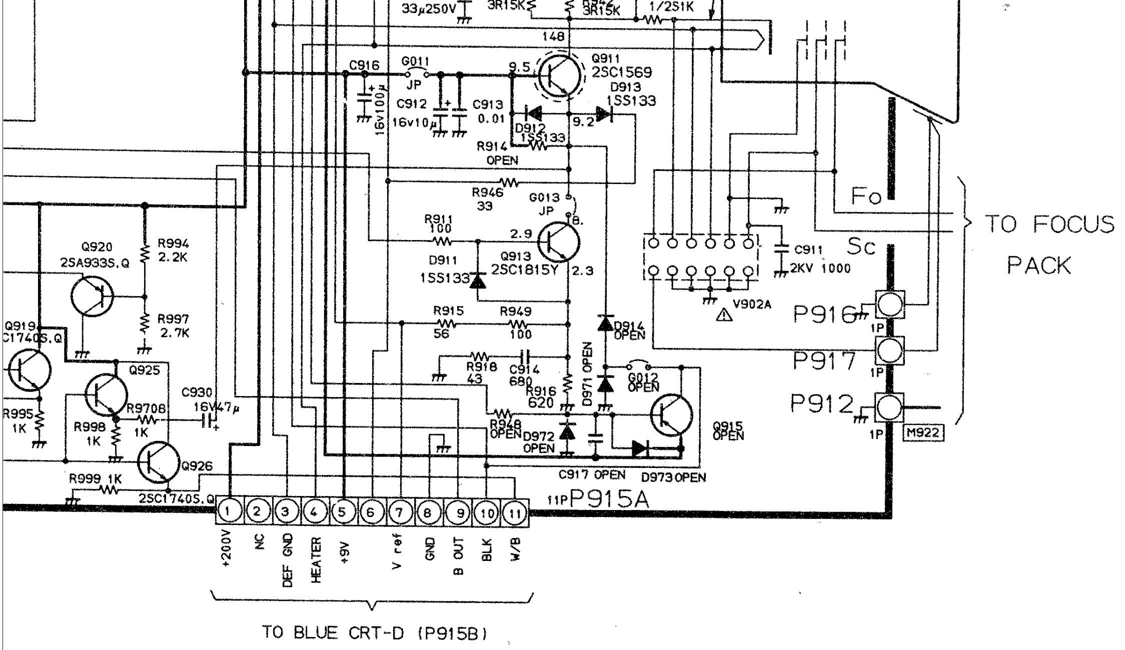

TO GREEN CRT-D (P914A)
NC
BLK
R IN
GND
Vref
+9V
HEATER
DEF GND
NC
200V
11
10
9
8
7
6
5
4
3
2
1
P914B 12P
R9702
1K
C923
16V47μ
C902
16V10μ
0.01
D901
1SS133
9.2
D903 1SS13
R904 OPEN
G002
OPEN
G003
JP
D904
OPEN
8.3
Q902
2SC1815Y
2.6
2.1
R901
100
D902
1SS133
D970
OPEN
V9
CRT SOC
R909
150
R905
39
R908
56
C904
470
SL
R906
620

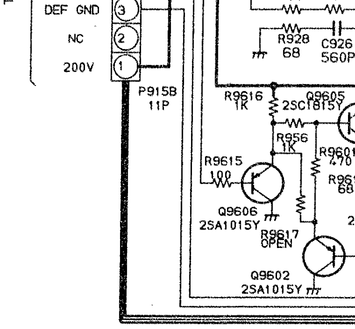

D901
9.2
D903 1SS133
1SS133
C902
16V10μ
R904 OPEN
G002
OPEN
G003
JP
D904
OPEN
8.3
Q902
2SC1815Y
2.6
2.1
D902
1SS133
R901
100
D970
OPEN
V901A
CRT SOCKET
R909
150
R905
39
R908
56
C904
470
SL
R906
620
G2
Fo
Sc
C901
2KV 1000
1P
P906
P907
1P
TO FOCUS
PACK


12P
VM
GND
GND
GND
R IN
G IN
B IN
+9V
TO VCD
PV14B
6P
R996
10K
R9704
10K
R9705
10K
G908
SHORT
R940
330
Q920
2SA933S.Q
R994
2.2K
R9707
560
R947
560
R938
470
Q918
2SA933S.Q
Q919
2SC1740S.Q
R997
2.7K
Q925
Q917
2SC1740S.Q
R993
2.2K
C930
16V47μ
R9708
1K
R995
1K
R998
1K
R9703
8.2K
R9706
270
Q926
R999 1K
2SC1740S.Q
+200V

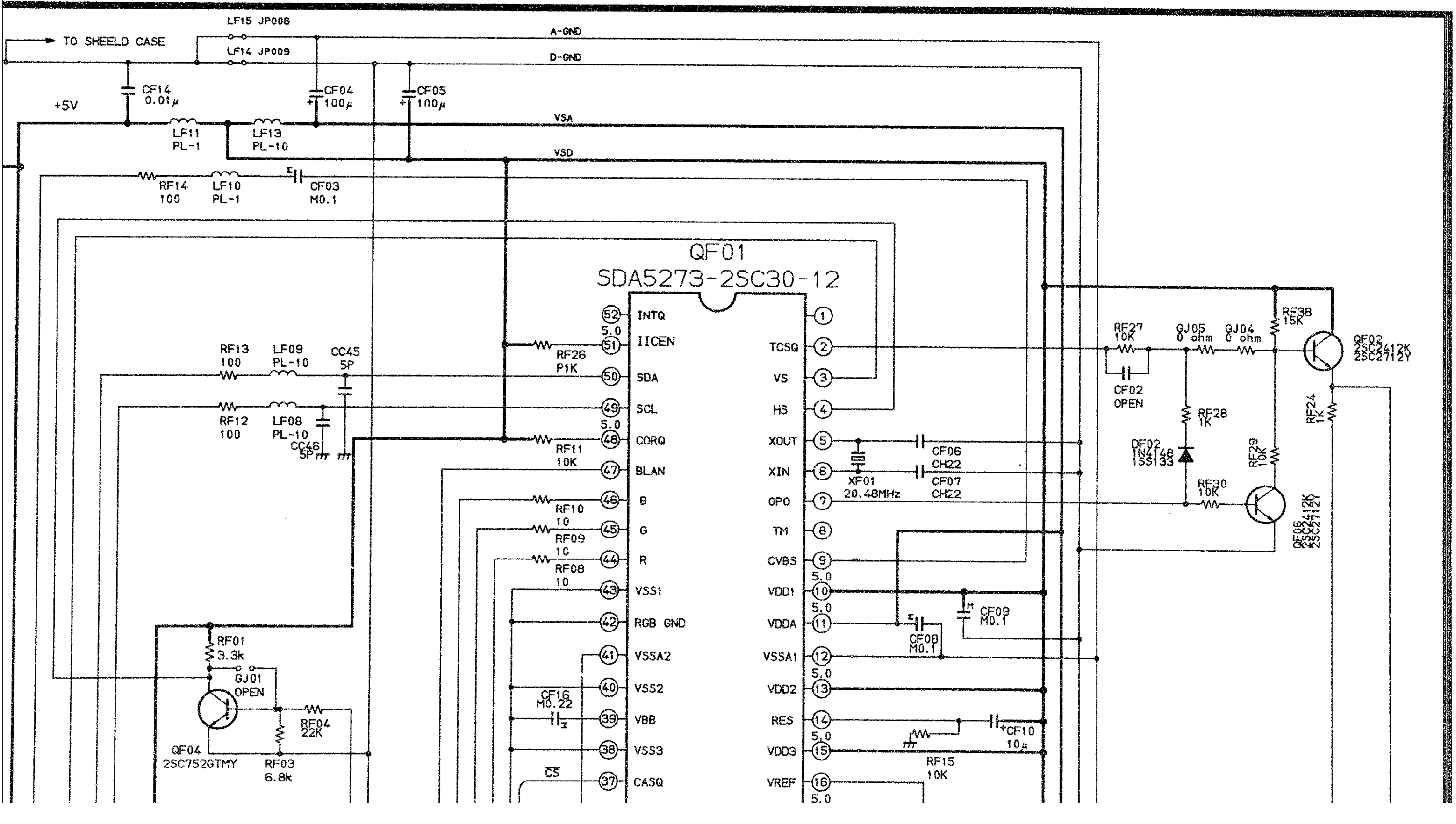
U104A TEXT BOARD PB7S

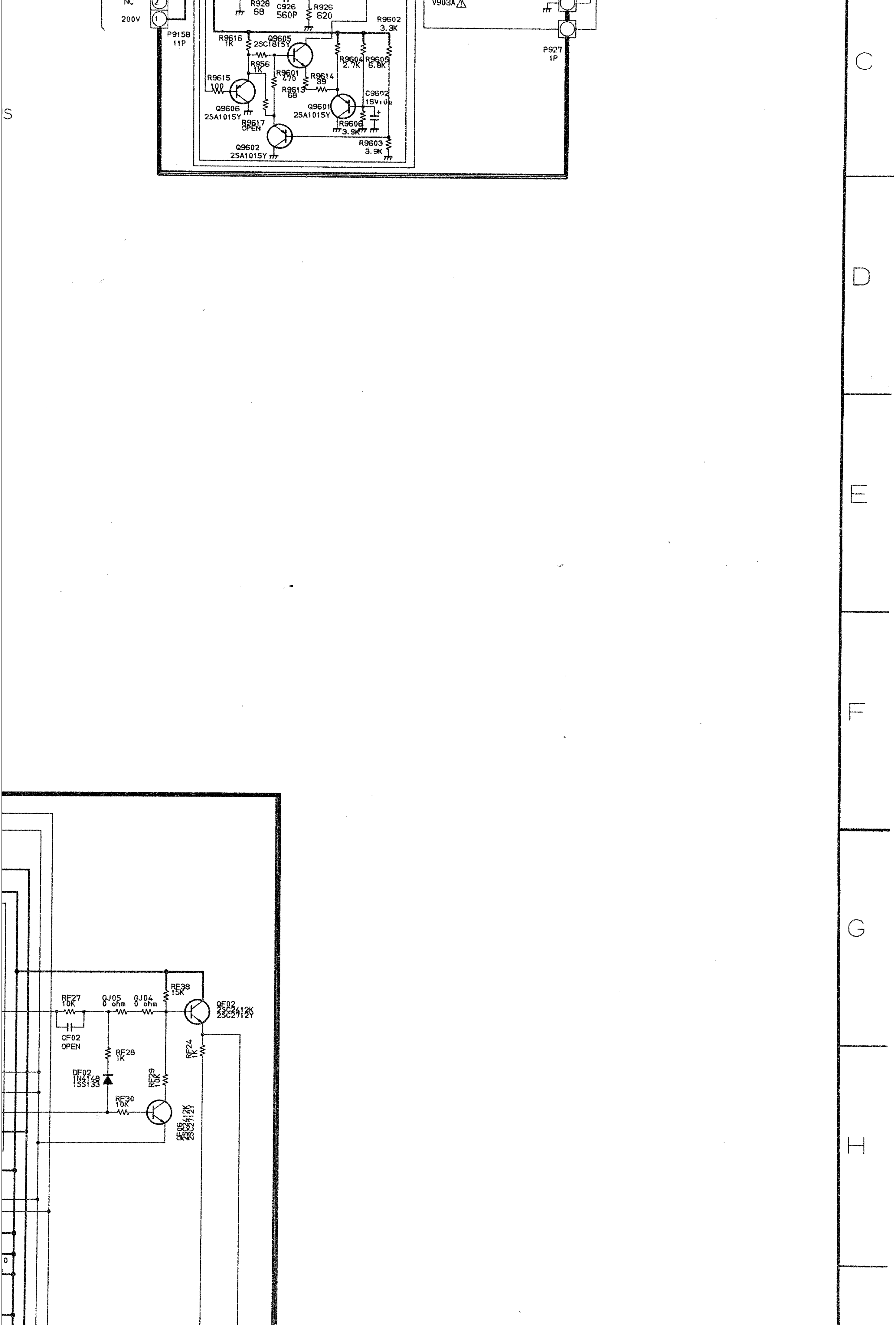

TO SHEELD CASE
CF14
0.01μ
+5V
LF11
PL-1
CF19
0.01
LF17
PL-10
CF17
16V100μ
CF18
16V100μ
RF14
100
LF10
PL-1
ICF10
ASAC14400
DQ01
DQ02
WE
RAS
A9R
I/O1
I/O2
WRITE
RAS
A9
Vss
I/O4
I/O3
CS
OE
DQ04
DQ03
A0
A1
A2
A3
Vcc
A8
A7
A6
A5
A4
RF13
100
RF12
100
RF0
3.3K
QF04
2SC752GTMY


33μ250V
3R15K
1/2S1K
148
C916
G011 JP
Q911 2SC1569
C912 16v10μ
C913 0.01
D913 1SS133
D912 1SS133
R914 OPEN
R946 33
G013 JP
R911 100
Q913 2SC1815Y
D911 1SS133
Q920 2SA933S.Q
R994 2.2K
R997 2.7K
Q919 C1740S.Q
Q925
R995 1K
R998 1K
R9708 1K
C930 16V47μ
Q926
R999 1K
2SC1740S.Q
R915 56
R949 100
R918 43
C914 680
R916 620
R948 OPEN
D972 OPEN
D971 OPEN
D914 OPEN
G012 OPEN
Q915 OPEN
C917 OPEN
D973 OPEN
C911 2KV 1000
V902A
Fo
Sc
TO FOCUS PACK
P916
P917
P912
M922
1P
11P P915A
+200V
NC
DEF GND
HEATER
+9V
V ref
GND
B OUT
BLK
W/B
TO BLUE CRT-D (P915B)


DEF GND
NC
200V
P915B 11P
R928 68
C926 560P
R9616 1K
Q9605 2SC1815Y
R956 1K
R9615 100
Q9606 2SA1015Y
R9617 OPEN
Q9602 2SA1015Y

DARD PB7928X


TO SHEELD CASE
LF15 JP008
LF14 JP009
A-GND
D-GND
+5V
CF14 0.01μ
CF04 100μ
CF05 100μ
LF11 PL-1
LF13 PL-10
VSA
VSD
RF14 100
LF10 PL-1
CF03 M0.1
QF01
SDA5273-2SC30-12
INTQ
IICEN
SDA
SCL
CORQ
BLAN
B
G
R
VSS1
RGB GND
VSSA2
VSS2
VBB
VSS3
CASQ
TCSQ
VS
HS
XOUT
XIN
GPO
TM
CVBS
VDD1
VDDA
VSSA1
VDD2
RES
VDD3
VREF
RF26 P1K
RF13 100
LF09 PL-10
CC45 5P
RF12 100
LF08 PL-10
CC46 5P
RF11 10K
RF10 10
RF09 10
RF08 10
CF16 M0.22
RF01 3.3k
GJ01 OPEN
RF04 22K
QF04 2SC752GTMY
RF03 6.8k
XF01 20.48MHz
CF06 CH22
CF07 CH22
CF09 M0.1
CF08 M0.1
CF10 10μ
RF15 10K
RF27 10K
CF02 OPEN
GJ05 0 ohm
GJ04 0 ohm
RF38 15K
QF02 2SC2412K 2SC2712Y
RF24 1K
RF28 1K
DF02 1N4148 1SS133
RF29 10K
RF30 10K
QF05 2SC2412K 2SC2712Y


NC
200V
2
1
P915B
11P
R928
68
C926
560P
R926
620
V903A
R9602
3.3K
P927
1P
R9616
1K
Q9605
2SC1815Y
R956
1K
R9601
470
R9614
39
R9613
68
R9604
2.7K
R9605
6.8K
R9615
100
Q9606
2SA1015Y
R9617
OPEN
Q9601
2SA1015Y
C9602
16V10μ
R9606
3.9K
Q9602
2SA1015Y
R9603
3.9K
S
RF27
10K
CF02
OPEN
GJ05
0 ohm
GJ04
0 ohm
RF38
15K
QF02
2SC2412K
2SC2712Y
RF24
1K
RF28
1K
DF02
1N4148
1SS133
RF29
10K
RF30
10K
QF06
2SC2412K
2SC2712Y
0
C
D
E
F
G
H

G

H

I

J

K

L

1 2 3 4

NOTE:

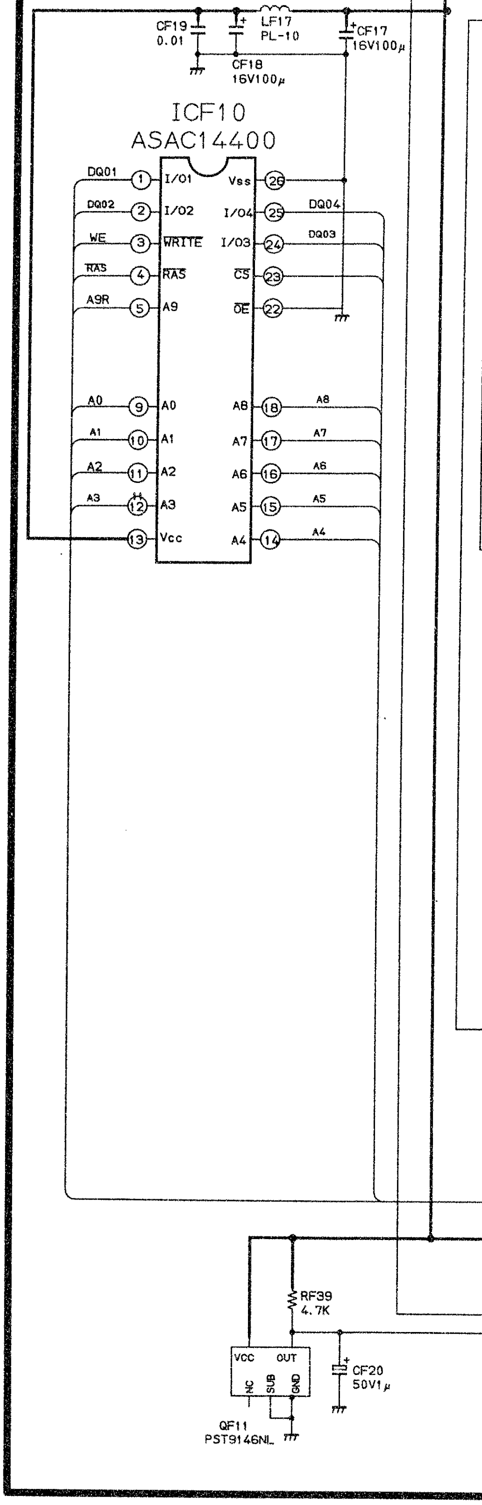
1. RESISTOR Resistance
carbon res

2.CAPACITOR Unless oth
values mor
All capaci

3. The parts indicated wi

4. This schematic diagram
modification notices.

4 5 6 7


CF19
0.01
LF17
PL-10
CF17
16V100μ
CF18
16V100μ
ICF10
ASAC14400
DQ01
DQ02
WE
RAS
A9R
A0
A1
A2
A3
I/O1
I/O2
WRITE
RAS
A9
A0
A1
A2
A3
Vcc
Vss
I/O4
I/O3
CS
OE
A8
A7
A6
A5
A4
DQ04
DQ03
A8
A7
A6
A5
A4
RF39
4.7K
VCC
OUT
NC
SUB
GND
CF20
50V1μ
QF11
PST9146NL

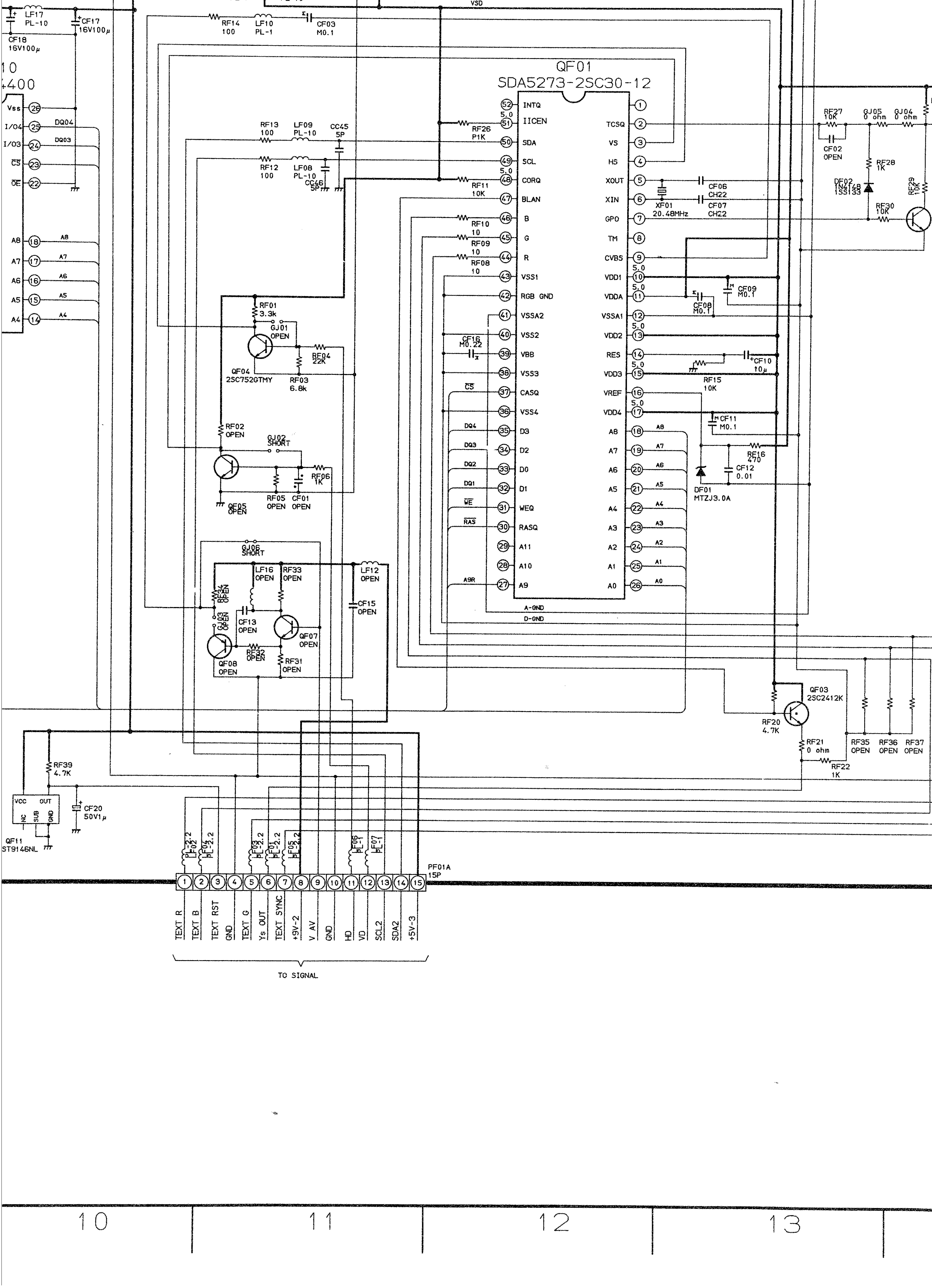
NOTE:

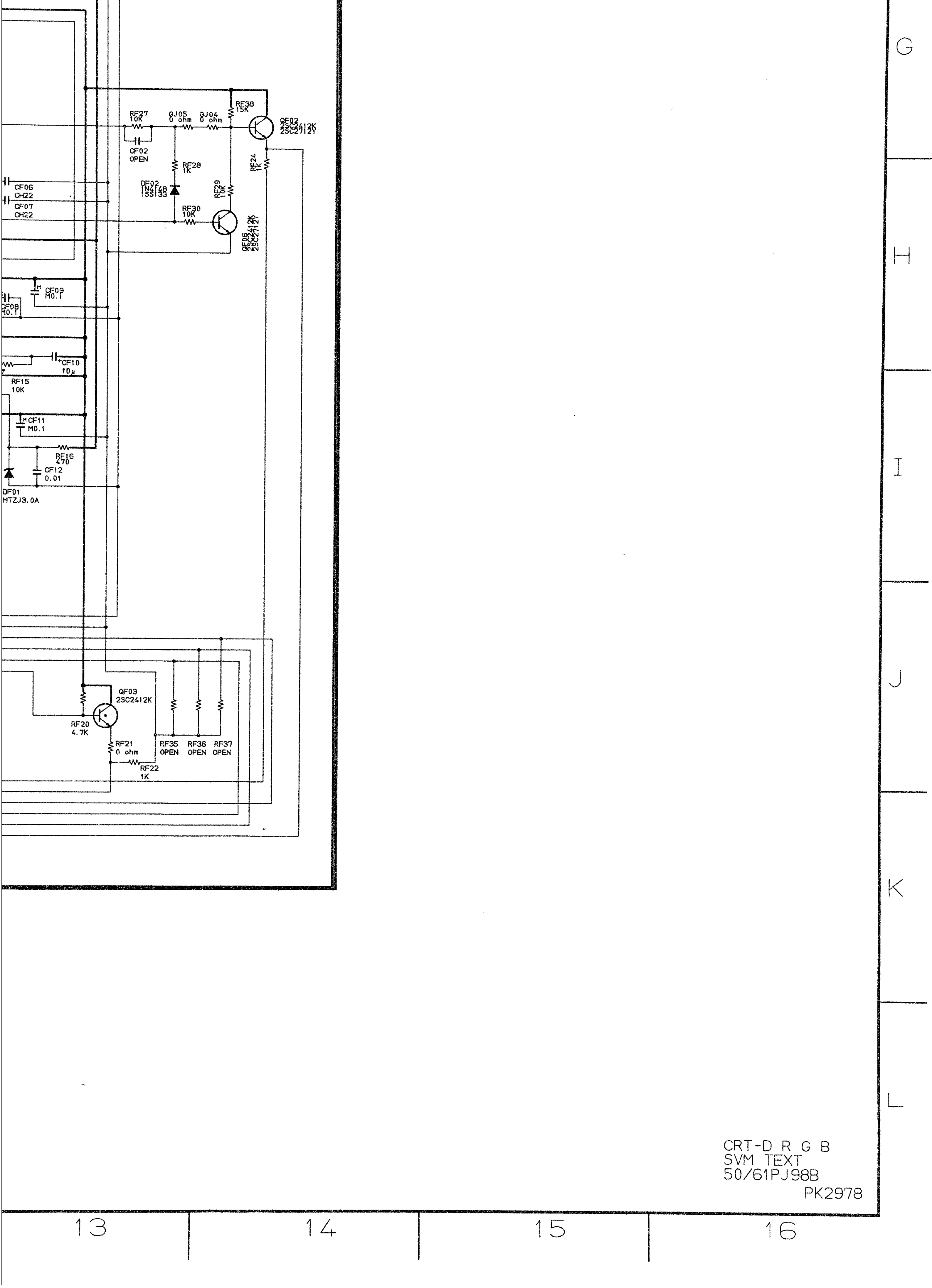
1. RESISTOR Resistance is shown in ohm [K = 1,000. M = 1,000,000]. All resistors sre 1/6W and 5% tolerance carbon resistor,unless otherwise noted as the following marks.
1/2R : Metal or Metal oxide of 1/2 watt 1/2S : Solid of 1/2 watt
1RF : Fuse resistor of 1 watt 10W : Cement of 10 watts
K = ±10% G = ±2% F = ±1%

2.CAPACITOR Unless otherwise noted in schematic,all capacitor valuse less than 1 are expressed in μF.and the values more than 1 in pF.
All capacitors are ceramic 50V, unless otherwise noted as the following marks.
Electrolitic capacitor Mylar capacitor

3. The parts indicated with "⚠" have specialcharacteristics should be replaced with identical parts only.

4. This schematic diagram is the latest the time of copying, so it must be changet in acordance with all informed modification notices.


LF17
PL-10
CF17
16V100μ
CF18
16V100μ
10
400
Vss 26
I/O4 25
I/O3 24
CS 23
OE 22
A8 18
A7 17
A6 16
A5 15
A4 14
DQ04
DQ03
A8
A7
A6
A5
A4
VSD
RF14
100
LF10
PL-1
CF03
M0.1
QF01
SDA5273-2SC30-12
RF13
100
LF09
PL-10
CC45
5P
RF12
100
LF08
PL-10
CC46
5P
RF26
P1K
RF11
10K
RF10
10
RF09
10
RF08
10
5.0
52 INTQ
51 IICEN
50 SDA
49 SCL
48 CORQ
47 BLAN
46 B
45 G
44 R
43 VSS1
42 RGB GND
41 VSSA2
40 VSS2
39 VBB
38 VSS3
37 CASQ
36 VSS4
35 D3
34 D2
33 D0
32 D1
31 WEQ
30 RASQ
29 A11
28 A10
27 A9
1
2 TCSQ
3 VS
4 HS
5 XOUT
6 XIN
7 GPO
8 TM
9 CVBS
10 VDD1
11 VDDA
12 VSSA1
13 VDD2
14 RES
15 VDD3
16 VREF
17 VDD4
18 A8
19 A7
20 A6
21 A5
22 A4
23 A3
24 A2
25 A1
26 A0
CF16
M0.22
CS
DQ4
DQ3
DQ2
DQ1
WE
RAS
A9R
A-GND
D-GND
CF06
CH22
CF07
CH22
XF01
20.48MHz
CF09
M0.1
CF08
M0.1
CF10
10μ
RF15
10K
CF11
M0.1
RF16
470
CF12
0.01
DF01
MTZJ3.0A
RF27
10K
GJ05
0 ohm
GJ04
0 ohm
CF02
OPEN
RF28
1K
DF02
1N4148
1SS133
RF29
10K
RF30
10K
RF01
3.3k
GJ01
OPEN
RF04
22K
QF04
2SC752GTMY
RF03
6.8k
RF02
OPEN
GJ02
SHORT
RF06
1K
RF05
OPEN
CF01
OPEN
QF05
OPEN
GJ06
SHORT
LF16
OPEN
RF33
OPEN
LF12
OPEN
RF34
OPEN
CF15
OPEN
GJ03
OPEN
CF13
OPEN
QF07
OPEN
RF32
OPEN
RF31
OPEN
QF08
OPEN
QF03
2SC2412K
RF20
4.7K
RF21
0 ohm
RF22
1K
RF35
OPEN
RF36
OPEN
RF37
OPEN
RF39
4.7K
VCC
OUT
NC
SUB
GND
CF20
50V1μ
QF11
ST9146NL
LF02
PL-2.2
LF04
PL-2.2
LF03
PL-2.2
LF01
PL-2.2
LF05
PL-2.2
LF06
PL-1
LF07
PL-1
PF01A
15P
1 TEXT R
2 TEXT B
3 TEXT RST
4 GND
5 TEXT G
6 Ys OUT
7 TEXT SYNC
8 +9V-2
9 V AV
10 GND
11 HD
12 VD
13 SCL2
14 SDA2
15 +5V-3
TO SIGNAL
10
11
12
13


RF27
10K
CF02
OPEN
GJ05
0 ohm
GJ04
0 ohm
RF38
15K
QF02
2SC2412K
2SC2712Y
RF24
1K
RF28
1K
DF02
1N4148
1SS133
RF29
10K
RF30
10K
QF06
2SC2412K
2SC2712Y
CF06
CH22
CF07
CH22
CF09
M0.1
CF08
M0.1
CF10
10μ
RF15
10K
CF11
M0.1
RF16
470
CF12
0.01
DF01
MTZJ3.0A
QF03
2SC2412K
RF20
4.7K
RF21
0 ohm
RF22
1K
RF35
OPEN
RF36
OPEN
RF37
OPEN
G
H
I
J
K
L
13
14
15
16

CRT-D R G B
SVM TEXT
50/61PJ98B
PK2978

SCHEMATIC DIAGRAM MODEL : 50PJ98G (1/6)

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 3. Do not degrade the safety of the receiver through improper servicing.

030-9915

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position. Set other controls for best picture.

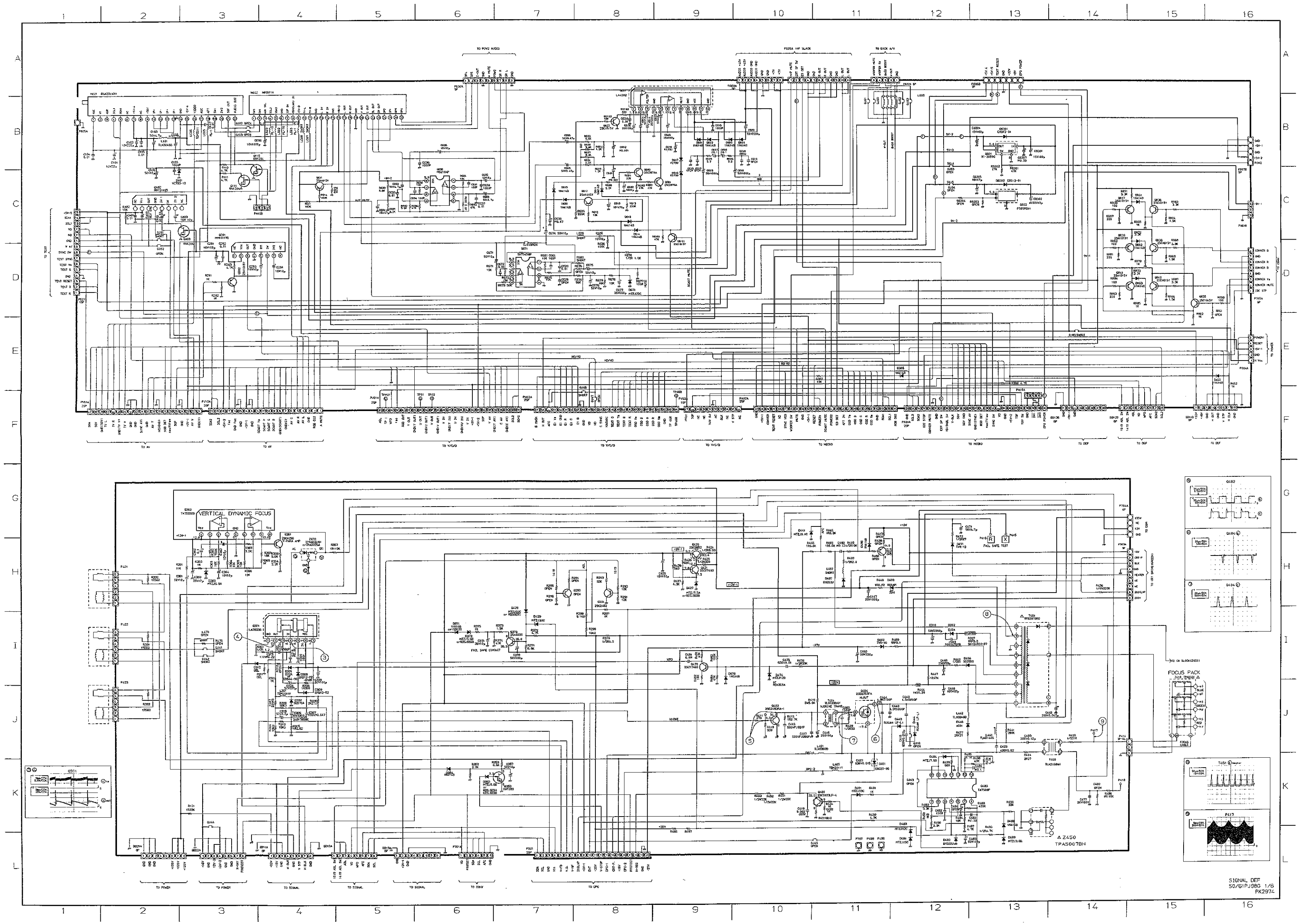
NOTES:

1. D.C. resistance value of a principal transformer is shown in this schematic diagram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

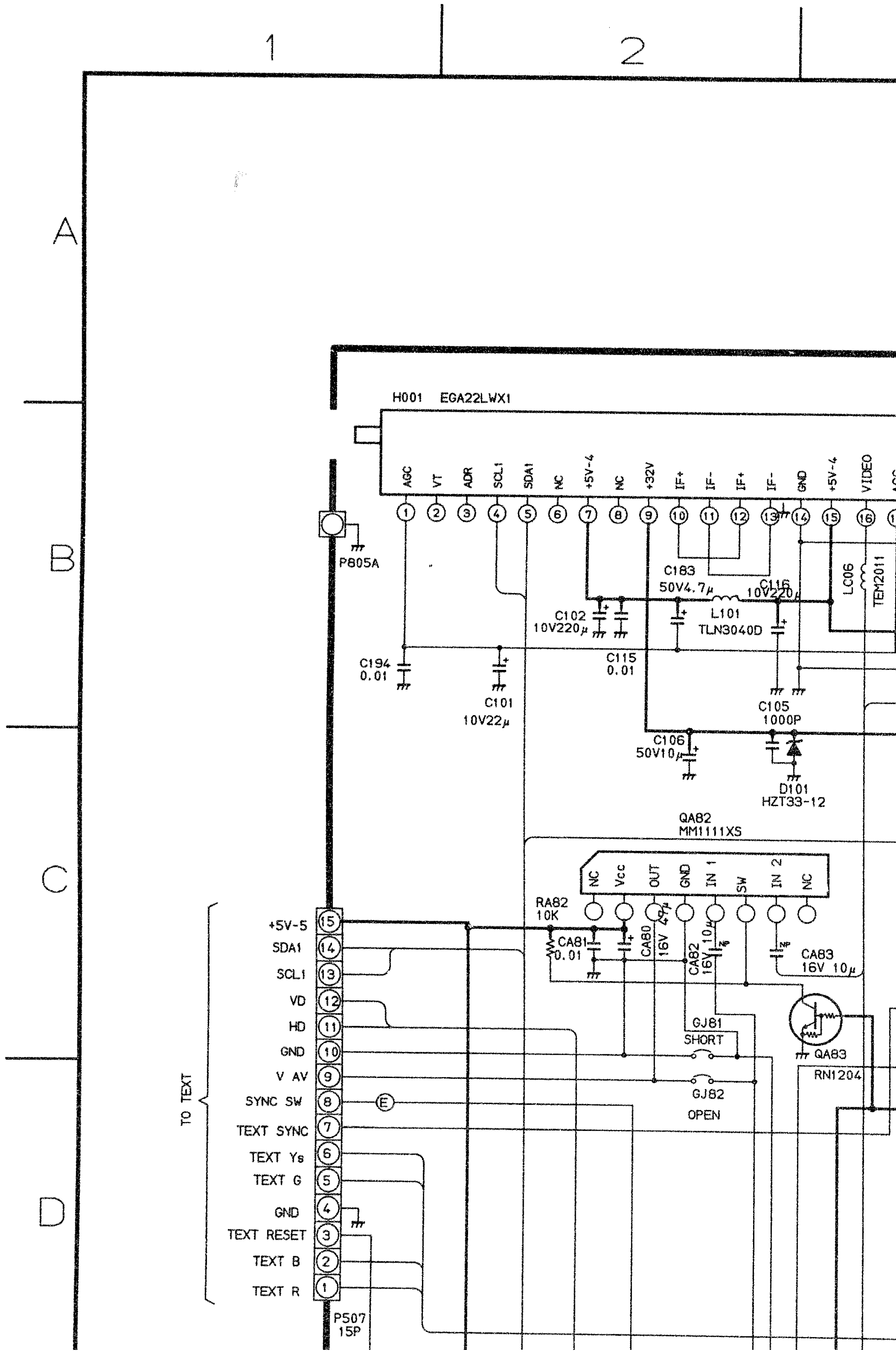
1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH, and the values less than 1 in H.



SCHEMATIC DIAGRAM   MODEL : 50PJ98G   (1/6)

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designa
ponents which have special characteristics important for safety and should be replaced only with types
those in the original circuit or specified in the parts list. The mounting position of replacements is to be
with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOT
3. Do not degrade the safety of the receiver through improper servicing.

030-9915

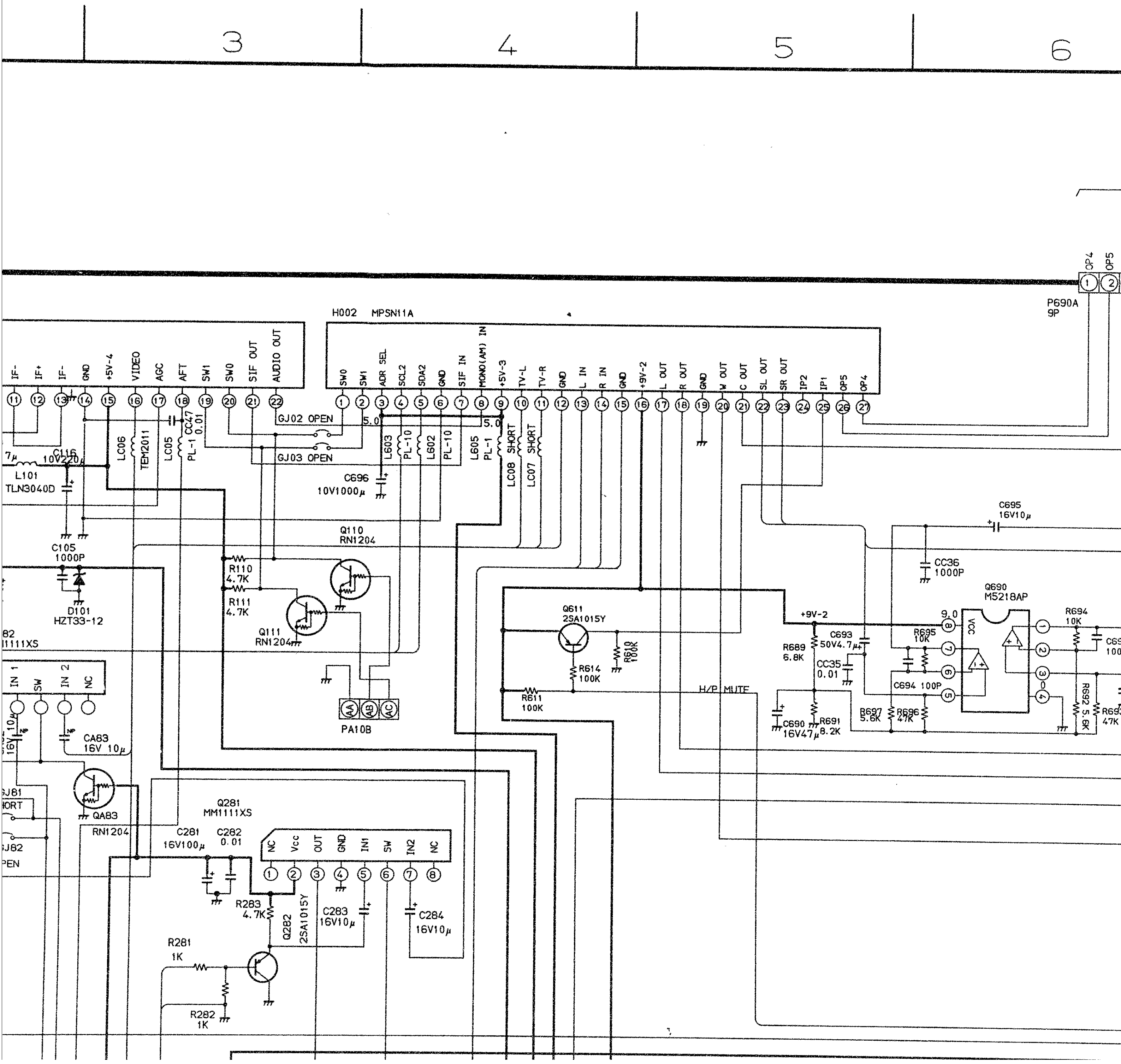

1
2
A
B
C
D
H001 EGA22LWX1
AGC
VT
ADR
SCL1
SDA1
NC
+5V-4
NC
+32V
IF+
IF-
IF+
IF-
GND
+5V-4
VIDEO
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
P805A
C183
50V4.7μ
C116
10V220μ
L101
TLN3040D
LC06
TEM2011
C102
10V220μ
C194
0.01
C115
0.01
C101
10V22μ
C105
1000P
C106
50V10μ
D101
HZT33-12
QA82
MM1111XS
NC
Vcc
OUT
GND
IN 1
SW
IN 2
NC
RA82
10K
CA81
0.01
CA80
16V 47μ
CA82
16V 10μ
NP
CA83
16V 10μ
GJ81
SHORT
GJ82
OPEN
QA83
RN1204
TO TEXT
+5V-5
SDA1
SCL1
VD
HD
GND
V AV
SYNC SW
TEXT SYNC
TEXT Ys
TEXT G
GND
TEXT RESET
TEXT B
TEXT R
E
P507
15P

(1/6)

irts list designate com-
l only with types identical to
ements is to be identical
T SAFETY NOTICE on page

OBSERVATION OF VOLTAGES AND WAVEFORMS

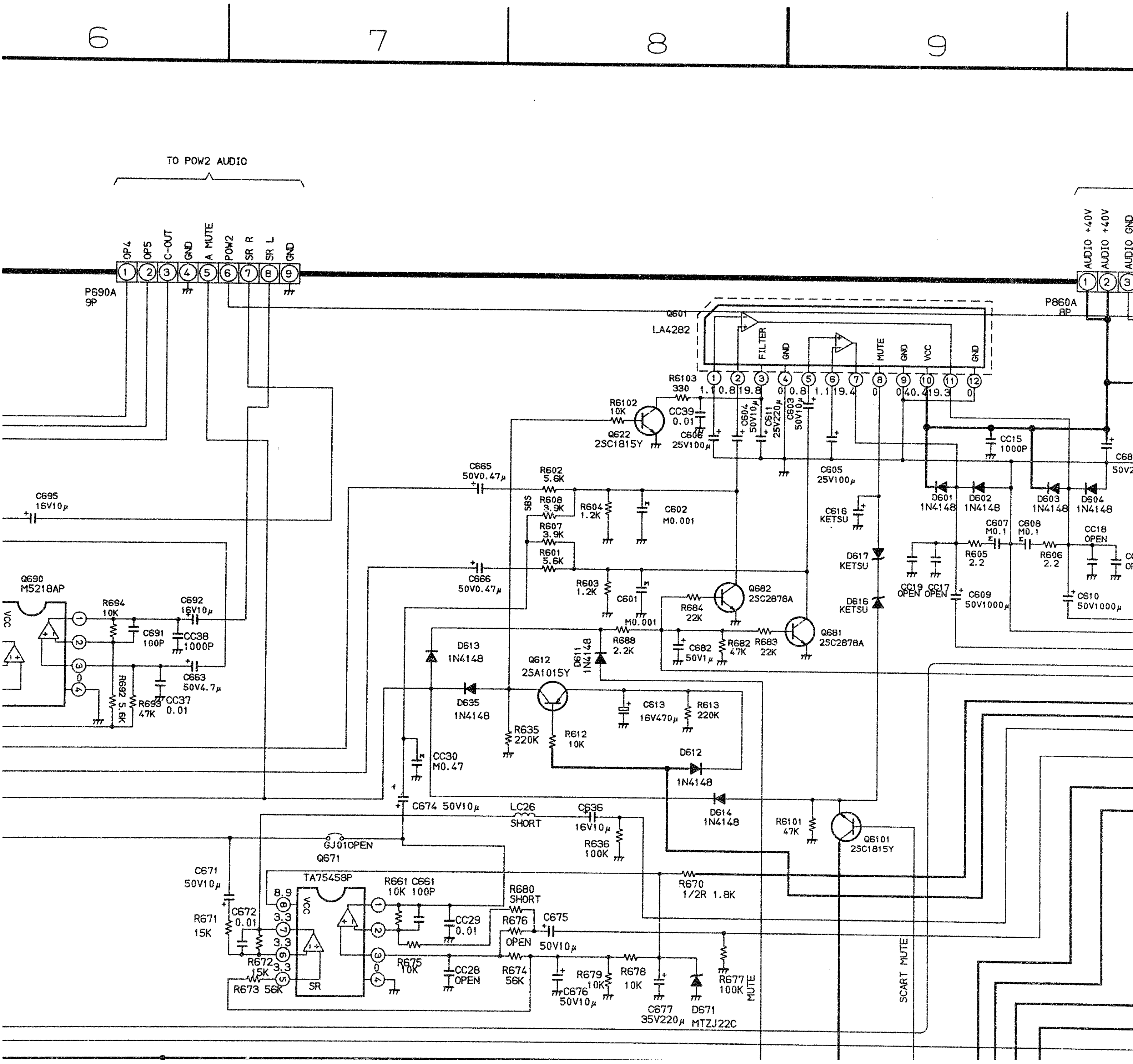
1. Voltages read with VTVM from point shown to chassis ground, l
   volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mic
   BRIGHTNESS control is almost in maximum position. Set other c
   picture.


3
4
5
6
H002 MPSN11A
IF- IF+ IF- GND +5V-4 VIDEO AGC AFT SW1 SW0 SIF OUT AUDIO OUT
SW0 SW1 ADR SEL SCL2 SDA2 GND SIF IN MONO(AM) IN +5V-3 TV-L TV-R GND L IN R IN GND +9V-2 L OUT R OUT GND W OUT C OUT SL OUT SR OUT IP2 IP1 OP5 OP4
GJ02 OPEN
GJ03 OPEN
5.0
LC06 TEM2011
LC05 PL-1
CC47 0.01
L603 PL-10
L602 PL-10
L605 PL-1
LC08 SHORT
LC07 SHORT
C116 10V220μ
L101 TLN3040D
C696 10V1000μ
C105 1000P
D101 HZT33-12
Q110 RN1204
R110 4.7K
R111 4.7K
Q111 RN1204
PA10B
IN 1 SW IN 2 NC
CA83 16V 10μ
QA83 RN1204
Q281 MM1111XS
C281 16V100μ
C282 0.01
NC Vcc OUT GND IN1 SW IN2 NC
R283 4.7K
Q282 2SA1015Y
C283 16V10μ
C284 16V10μ
R281 1K
R282 1K
Q611 2SA1015Y
R610 100K
R614 100K
R611 100K
H/P MUTE
+9V-2
R689 6.8K
C693 50V4.7μ
CC35 0.01
C690 16V47μ
R691 8.2K
R695 10K
C694 100P
R697 5.6K
R696 47K
Q690 M5218AP
9.0
VCC
R694 10K
R692 5.6K
47K
C695 16V10μ
CC36 1000P
P690A 9P
OP4 OP5

assis ground, line voltage 220
ry ±20%.
cope and a low capacity probe.
signal.
ols are in mid position and
on. Set other controls for best

NOTES:

1. D.C. resistance value of a principal transformer is s
gram. These are measured for separated from the cir
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.



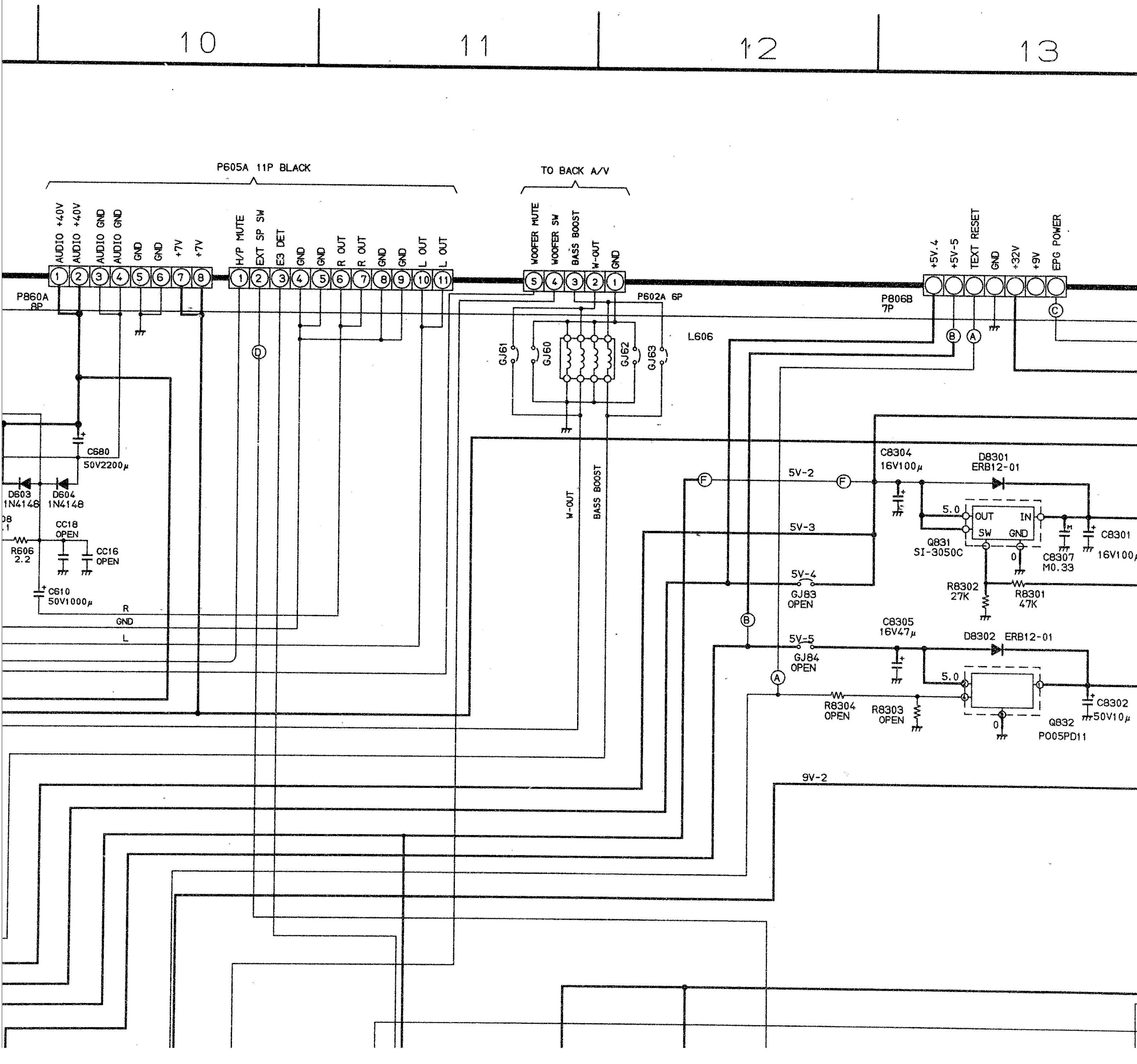
6
7
8
9
TO POW2 AUDIO
OP4
OP5
C-OUT
GND
A MUTE
POW2
SR R
SR L
GND
P690A
9P
AUDIO +40V
AUDIO +40V
AUDIO GND
P860A
8P
Q601
LA4282
FILTER
GND
MUTE
GND
VCC
GND
R6103
330
1.1
0.8
19.8
0
0.8
1.1
19.4
0
0
40.4
19.3
0
R6102
10K
Q622
2SC1815Y
CC39
0.01
C606
25V100μ
C604
50V10μ
C611
25V220μ
C603
50V10μ
C605
25V100μ
CC15
1000P
C68
50V2
C665
50V0.47μ
R602
5.6K
SBS
R608
3.9K
R607
3.9K
R601
5.6K
R604
1.2K
C602
M0.001
C616
KETSU
D601
1N4148
D602
1N4148
D603
1N4148
D604
1N4148
C607
M0.1
C608
M0.1
CC18
OPEN
R605
2.2
R606
2.2
D617
KETSU
CC19
OPEN
CC17
OPEN
C609
50V1000μ
C610
50V1000μ
D616
KETSU
C695
16V10μ
C666
50V0.47μ
R603
1.2K
C601
M0.001
Q682
2SC2878A
R684
22K
Q681
2SC2878A
C682
50V1μ
R682
47K
R683
22K
R688
2.2K
Q690
M5218AP
VCC
R694
10K
C692
16V10μ
C691
100P
CC38
1000P
C663
50V4.7μ
R692
5.6K
R693
47K
CC37
0.01
D613
1N4148
D611
1N4148
Q612
2SA1015Y
D635
1N4148
C613
16V470μ
R613
220K
R635
220K
R612
10K
D612
1N4148
CC30
M0.47
C674 50V10μ
LC26
SHORT
C636
16V10μ
R636
100K
D614
1N4148
R6101
47K
Q6101
2SC1815Y
GJ010PEN
Q671
C671
50V10μ
R671
15K
C672
0.01
R672
15K
R673 56K
TA75458P
8.9
3.3
3.3
3.3
0
VCC
SR
R661
10K
C661
100P
CC29
0.01
R680
SHORT
R676
OPEN
C675
50V10μ
R670
1/2R 1.8K
R675
10K
CC28
OPEN
R674
56K
C676
50V10μ
R679
10K
R678
10K
C677
35V220μ
D671
MTZJ22C
R677
100K
MUTE
SCART MUTE

ormer is shown in this schematic dia-
om the circuit.
notice.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and IN

1. Resistance is shown in ohm, k=1,000, M=1,00
2. Unless other wise noted in schematic, all capa sed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all induc sed in μH, and the values less than 1 in H.

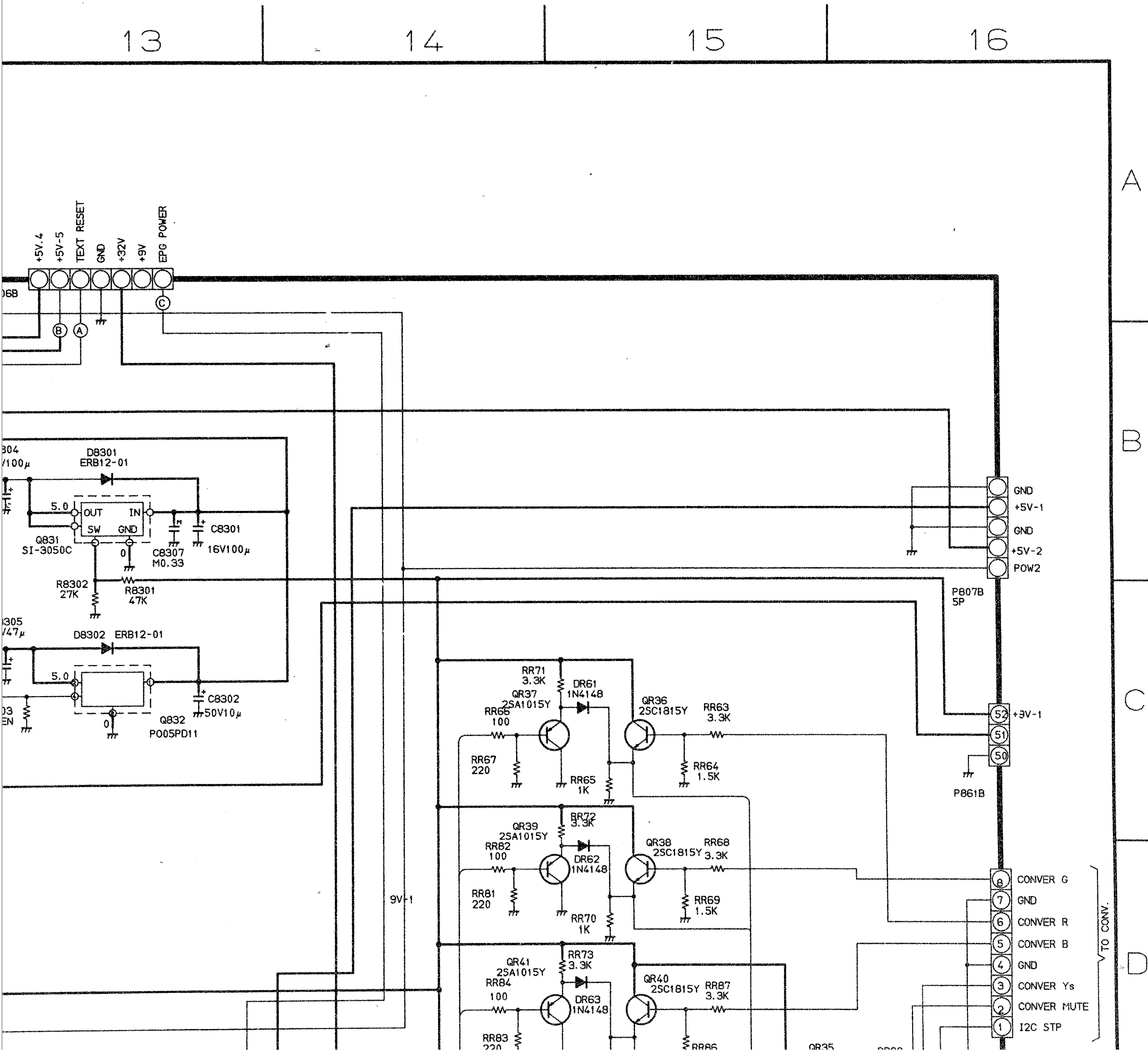

10
11
12
13
P605A 11P BLACK
AUDIO +40V
AUDIO +40V
AUDIO GND
AUDIO GND
GND
GND
+7V
+7V
H/P MUTE
EXT SP SW
E3 DET
GND
GND
R OUT
R OUT
GND
GND
L OUT
L OUT
P860A
8P
TO BACK A/V
WOOFER MUTE
WOOFER SW
BASS BOOST
W-OUT
GND
P602A 6P
GJ61
GJ60
GJ62
GJ63
L606
W-OUT
BASS BOOST
C680
50V2200μ
D603
1N4148
D604
1N4148
CC18
OPEN
CC16
OPEN
R606
2.2
C610
50V1000μ
R
GND
L
+5V.4
+5V-5
TEXT RESET
GND
+32V
+9V
EPG POWER
P806B
7P
C8304
16V100μ
D8301
ERB12-01
5V-2
5V-3
5.0
OUT
IN
SW
GND
Q831
SI-3050C
C8307
M0.33
C8301
16V100
5V-4
GJ83
OPEN
R8302
27K
R8301
47K
C8305
16V47μ
D8302 ERB12-01
5V-5
GJ84
OPEN
5.0
R8304
OPEN
R8303
OPEN
C8302
50V10μ
Q832
P005PD11
9V-2

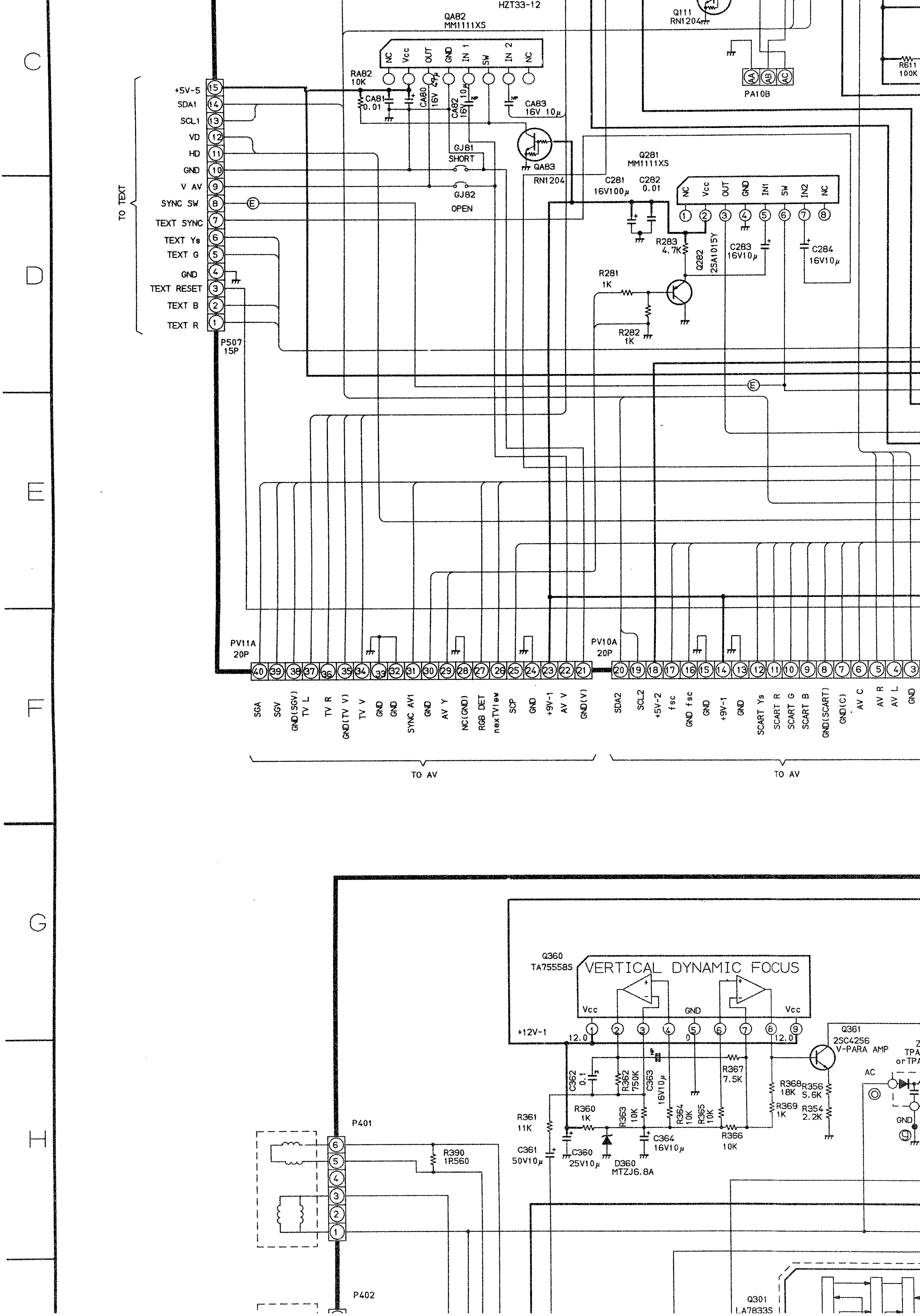
CAPACITOR and INDUCTOR

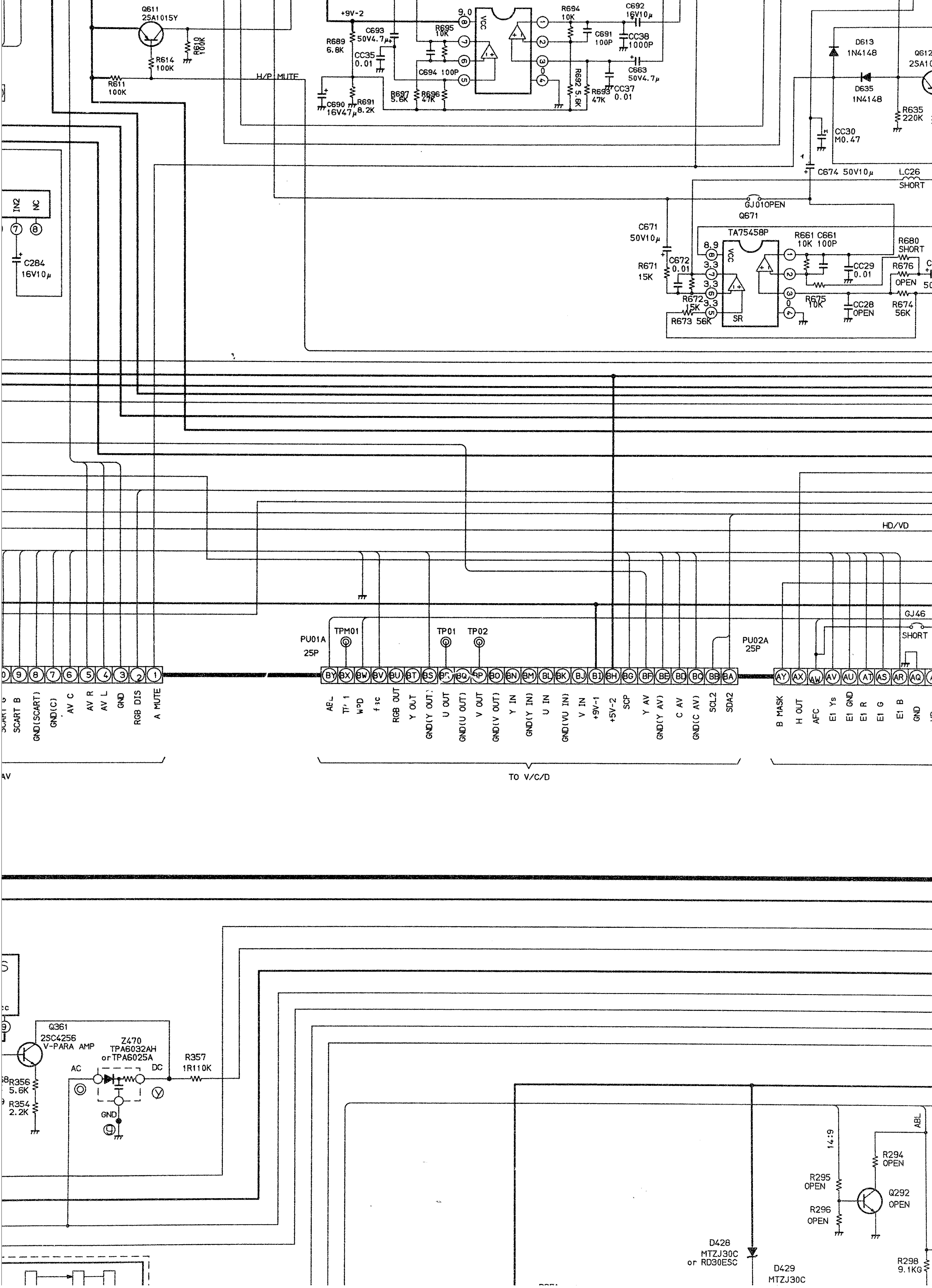
hm, k=1,000, M=1,000,000

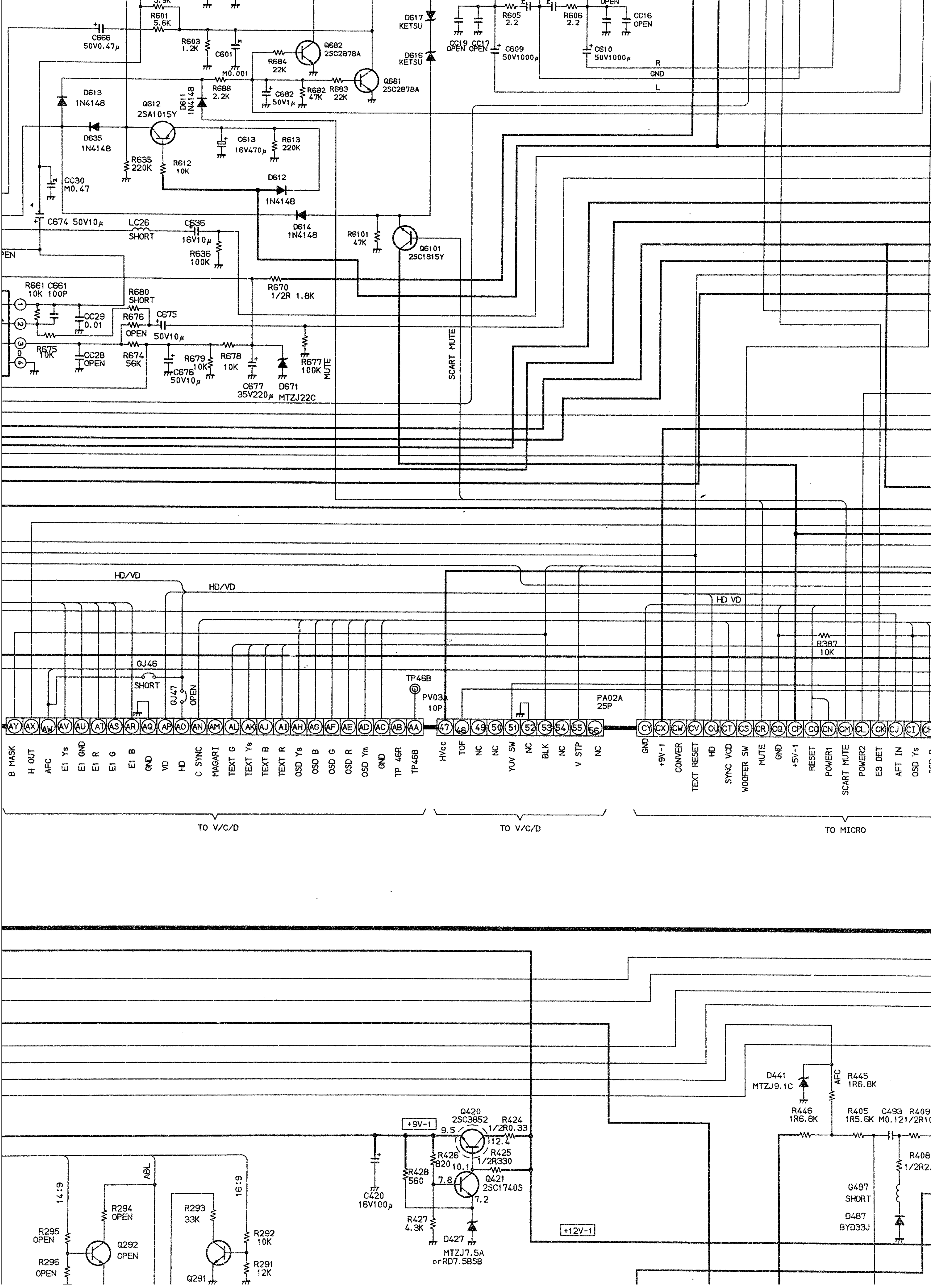
in schematic, all capacitor values less than 1 are expres-
more than 1 in pF.

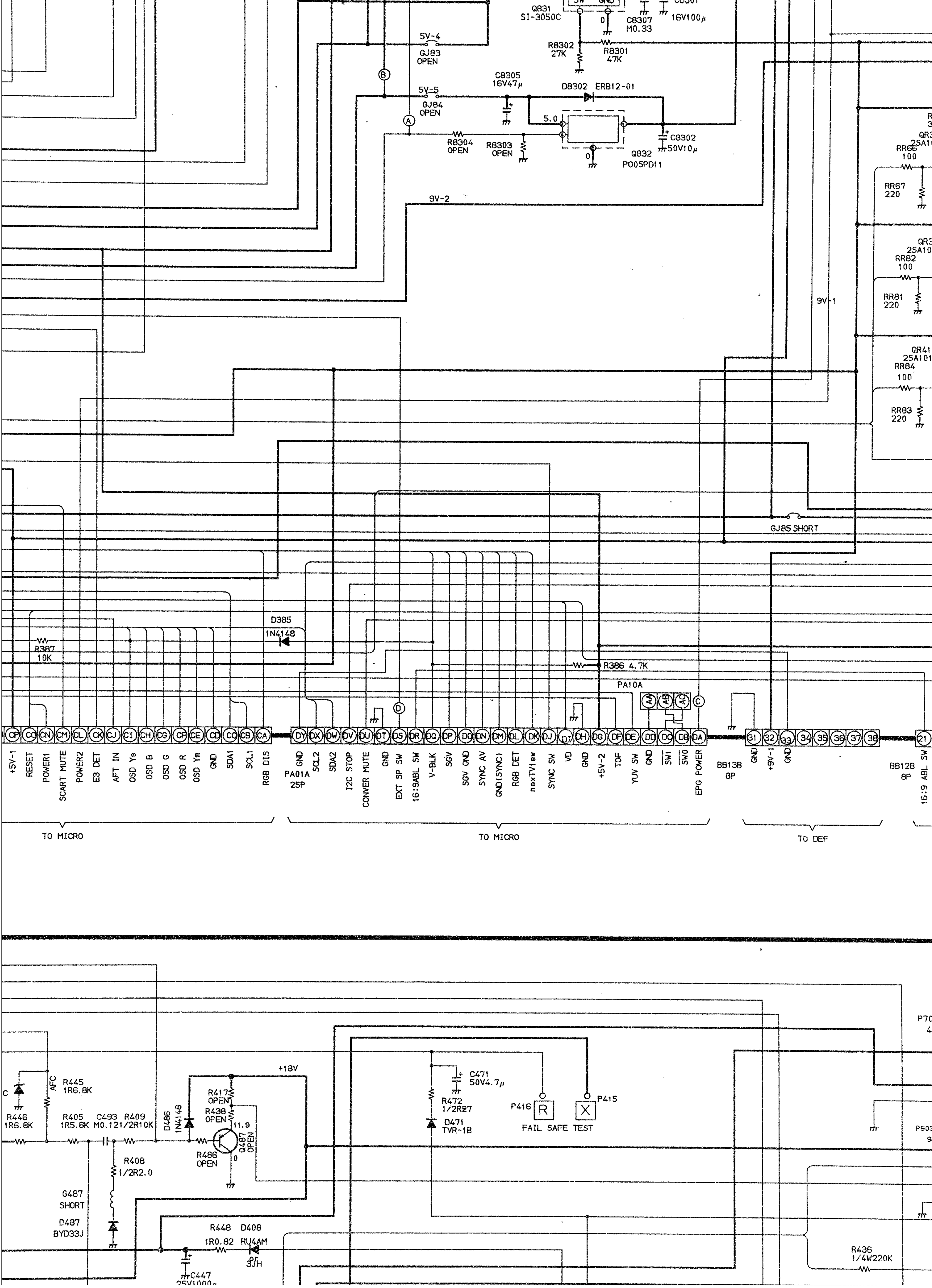
in schematic, all inductor values more than 1 are expres-
s less than 1 in H.


13
14
15
16
A
B
C
D
+5V.4
+5V-5
TEXT RESET
GND
+32V
+9V
EPG POWER
B
A
C
304
V100µ
D8301
ERB12-01
5.0
OUT
IN
SW
GND
Q831
SI-3050C
0
C8307
M0.33
C8301
16V100µ
R8302
27K
R8301
47K
305
47µ
D8302 ERB12-01
5.0
C8302
50V10µ
0
Q832
P005PD11
EN
9V-1
GND
+5V-1
GND
+5V-2
POW2
P807B
5P
52
+9V-1
51
50
P861B
RR71
3.3K
DR61
1N4148
QR37
2SA1015Y
RR66
100
QR36
2SC1815Y
RR63
3.3K
RR67
220
RR65
1K
RR64
1.5K
RR72
3.3K
QR39
2SA1015Y
RR82
100
QR38
2SC1815Y
RR68
3.3K
DR62
1N4148
RR81
220
RR70
1K
RR69
1.5K
RR73
3.3K
QR41
2SA1015Y
RR84
100
QR40
2SC1815Y
RR87
3.3K
DR63
1N4148
RR83
220
RR86
QR35
8
CONVER G
7
GND
6
CONVER R
5
CONVER B
4
GND
3
CONVER Ys
2
CONVER MUTE
1
I2C STP
TO CONV.

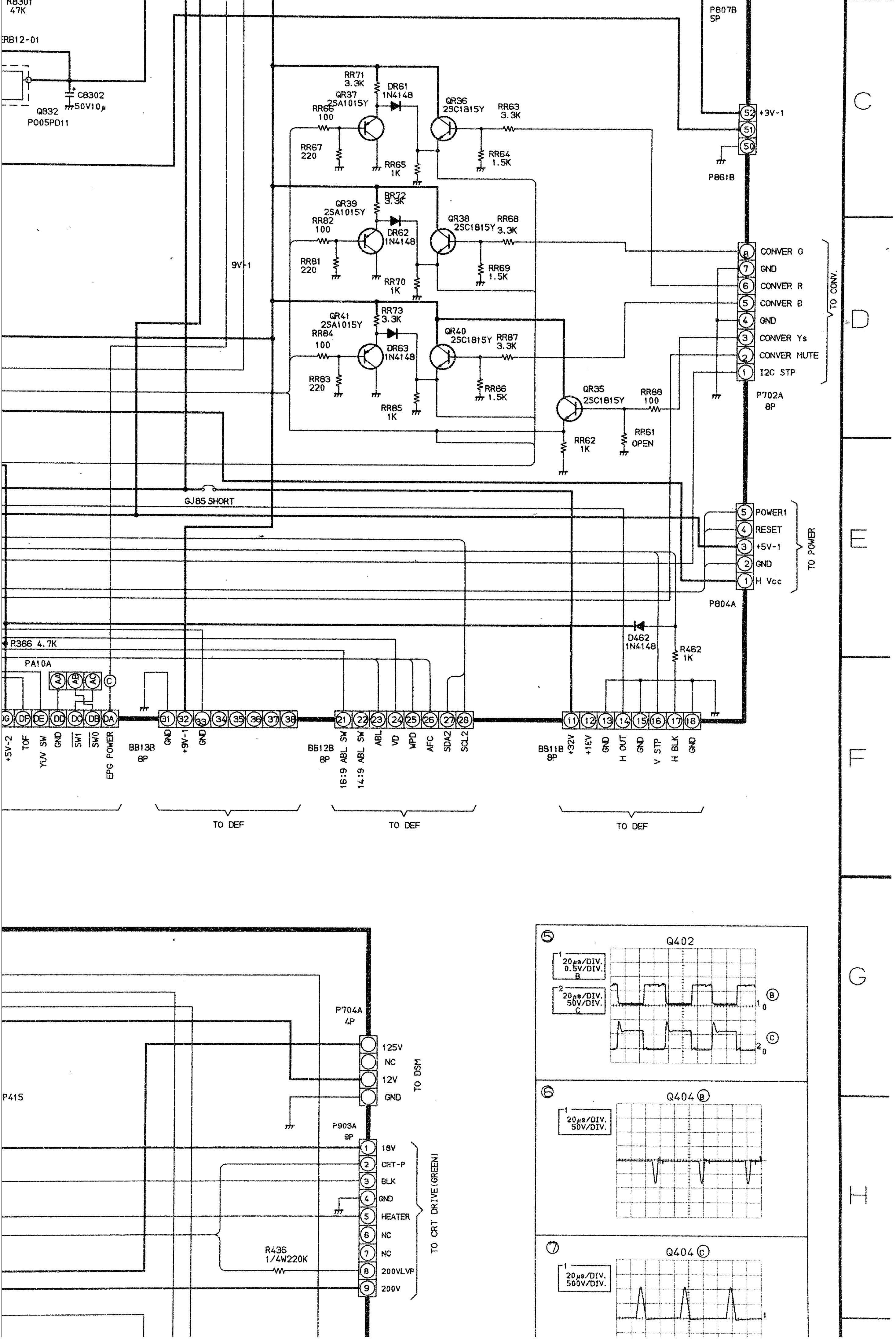
C
D
E
F
G
H
HZT33-12
QA82
MM1111XS
NC
Vcc
OUT
GND
IN 1
SW
IN 2
NC
RA82
10K
CA81
0.01
CA80
16V 47μ
CA82
16V 10μ
CA83
16V 10μ
GJ81
SHORT
GJ82
OPEN
QA83
RN1204
Q111
RN1204
PA10B
AA
AB
AC
R611
100K
+5V-5
SDA1
SCL1
VD
HD
GND
V AV
SYNC SW
TEXT SYNC
TEXT Ys
TEXT G
GND
TEXT RESET
TEXT B
TEXT R
TO TEXT
P507
15P
E
Q281
MM1111XS
C281
16V100μ
C282
0.01
R283
4.7K
Q282
2SA1015Y
C283
16V10μ
C284
16V10μ
R281
1K
R282
1K
PV11A
20P
PV10A
20P
SGA
SGV
GND(SGV)
TV L
TV R
GND(TV V)
TV V
GND
GND
SYNC AV1
GND
AV Y
NC(GND)
RGB DET
nexTView
SCP
GND
+9V-1
AV V
GND(V)
SDA2
SCL2
+5V-2
fsc
GND fsc
GND
+9V-1
GND
SCART Ys
SCART R
SCART G
SCART B
GND(SCART)
GND(C)
AV C
AV R
AV L
GND
TO AV
TO AV
Q360
TA75558S
VERTICAL DYNAMIC FOCUS
Vcc
GND
Vcc
+12V-1
12.0
0
12.0
Q361
2SC4256
V-PARA AMP
AC
GND
C362
0.1
R362
750K
C363
16V10μ
R367
7.5K
R368
18K
R356
5.6K
R369
1K
R354
2.2K
R361
11K
R360
1K
R363
10K
R364
10K
R365
10K
R366
10K
C364
16V10μ
C361
50V10μ
C360
25V10μ
D360
MTZJ6.8A
P401
R390
1R560
P402
Q301
LA7833S

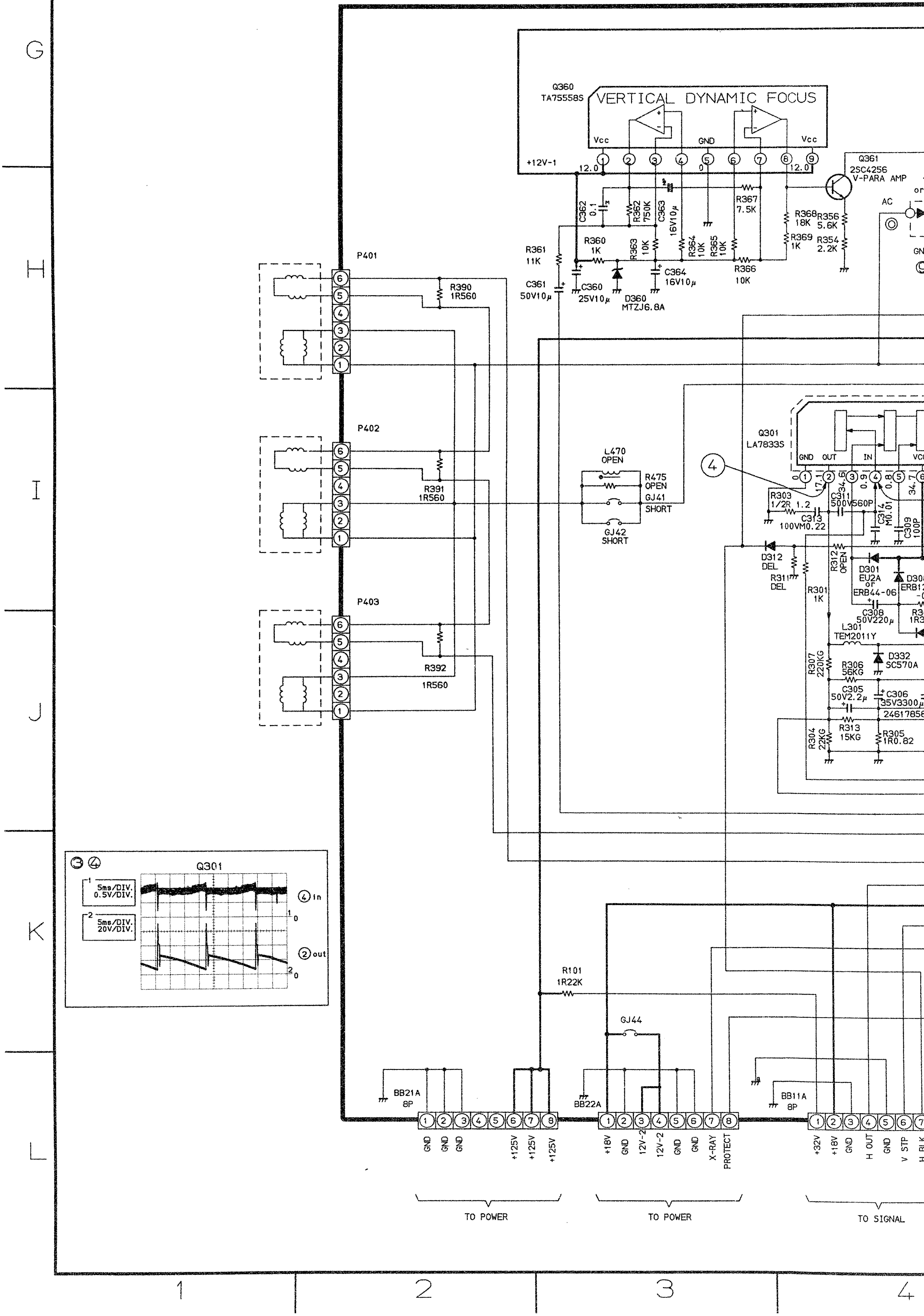

Q611
2SA1015Y
R610
100K
R614
100K
R611
100K
H/P MUTE
+9V-2
R689
6.8K
C693
50V4.7μ
CC35
0.01
C690
16V47μ
R691
8.2K
9.0
R695
10K
C694 100P
R697
5.6K
R696
47K
VCC
R694
10K
C692
16V10μ
C691
100P
CC38
1000P
C663
50V4.7μ
R692 5.6K
R693
47K
CC37
0.01
D613
1N4148
D635
1N4148
Q612
2SA1
R635
220K
CC30
M0.47
C674 50V10μ
LC26
SHORT
IN2
NC
C284
16V10μ
GJ010OPEN
Q671
C671
50V10μ
TA75458P
8.9
3.3
3.3
3.3
R661 C661
10K 100P
R680
SHORT
R671
15K
C672
0.01
CC29
0.01
R676
OPEN
R675
10K
R674
56K
CC28
OPEN
R672
15K
R673 56K
SR
HD/VD
PU01A
25P
TPM01
TP01
TP02
PU02A
25P
GJ46
SHORT
SCART B
GND(SCART)
GND(C)
AV C
AV R
AV L
GND
RGB DIS
A MUTE
AV
ABL
TP 1
WPD
fsc
RGB OUT
Y OUT
GND(Y OUT)
U OUT
GND(U OUT)
V OUT
GND(V OUT)
Y IN
GND(Y IN)
U IN
GND(VU IN)
V IN
+9V-1
+5V-2
SCP
Y AV
GND(Y AV)
C AV
GND(C AV)
SCL2
SDA2
TO V/C/D
B MASK
H OUT
AFC
E1 Ys
E1 GND
E1 R
E1 G
E1 B
GND
BY BX BW BV BU BT BS BR BQ BP BO BN BM BL BK BJ BI BH BG BF BE BD BC BB BA
AY AX AW AV AU AT AS AR AQ
Q361
2SC4256
V-PARA AMP
Z470
TPA6032AH
or TPA6025A
AC
DC
GND
R357
1R110K
R356
5.6K
R354
2.2K
14:9
ABL
R294
OPEN
R295
OPEN
R296
OPEN
Q292
OPEN
R298
9.1KG
D428
MTZJ30C
or RD30ESC
D429
MTZJ30C

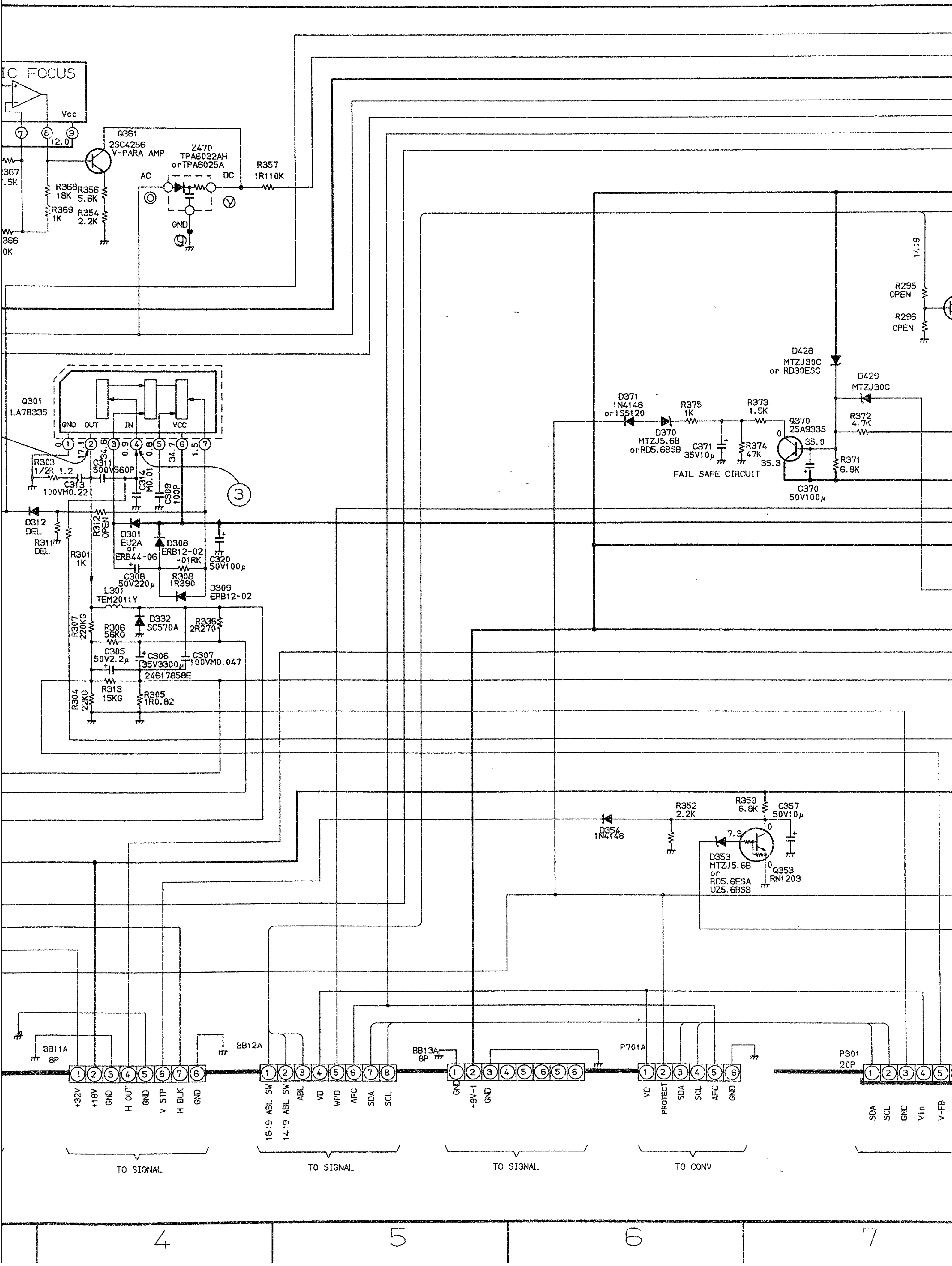

R601
5.6K
C666
50V0.47μ
R603
1.2K
C601
M0.001
Q682
2SC2878A
R684
22K
Q661
2SC2878A
C682
50V1μ
R682
47K
R683
22K
D617
KETSU
D616
KETSU
R605
2.2
R606
2.2
OPEN
CC16
OPEN
CC19
OPEN
CC17
OPEN
C609
50V1000μ
C610
50V1000μ
R
GND
L
D613
1N4148
D611
1N4148
R688
2.2K
Q612
2SA1015Y
D635
1N4148
C613
16V470μ
R613
220K
R635
220K
R612
10K
D612
1N4148
CC30
M0.47
C674 50V10μ
LC26
SHORT
C636
16V10μ
R636
100K
D614
1N4148
R6101
47K
Q6101
2SC1815Y
OPEN
R661 C661
10K 100P
R680
SHORT
R670
1/2R 1.8K
CC29
0.01
R676
OPEN
C675
50V10μ
R675
10K
CC28
OPEN
R674
56K
C676
50V10μ
R679
10K
R678
10K
C677
35V220μ
D671
MTZJ22C
R677
100K
MUTE
SCART MUTE
HD/VD
HD/VD
HD VD
R387
10K
GJ46
SHORT
GJ47
OPEN
TP46B
PV03A
10P
PA02A
25P
AY AX AW AV AU AT AS AR AQ AP AO AN AM AL AK AJ AI AH AG AF AE AD AC AB AA
B MASK
H OUT
AFC
E1 Ys
E1 GND
E1 R
E1 G
E1 B
GND
VD
HD
C SYNC
MAGARI
TEXT G
TEXT Ys
TEXT B
TEXT R
OSD Ys
OSD B
OSD G
OSD R
OSD Ym
GND
TP 46R
TP46B
47 48 49 50 51 52 53 54 55 56
HVcc
TOF
NC
NC
YUV SW
NC
BLK
NC
V STP
NC
CY CX CW CV CU CT CS CR CQ CP CO CN CM CL CK CJ CI
GND
+9V-1
CONVER
TEXT RESET
HD
SYNC VCD
WOOFER SW
MUTE
GND
+5V-1
RESET
POWER1
SCART MUTE
POWER2
E3 DET
AFT IN
OSD Ys
TO V/C/D
TO V/C/D
TO MICRO
D441
MTZJ9.1C
AFC
R445
1R6.8K
R446
1R6.8K
R405
1R5.6K
C493
M0.12
R409
1/2R1
R408
1/2R2.
G487
SHORT
D487
BYD33J
+9V-1
Q420
2SC3852
R424
1/2R0.33
9.5
12.4
R426
820
R425
1/2R330
10.1
R428
560
7.8
Q421
2SC1740S
7.2
C420
16V100μ
R427
4.3K
D427
MTZJ7.5A
orRD7.5B5B
+12V-1
ABL
14:9
16:9
R294
OPEN
R293
33K
R295
OPEN
Q292
OPEN
R292
10K
R296
OPEN
R291
12K
Q291

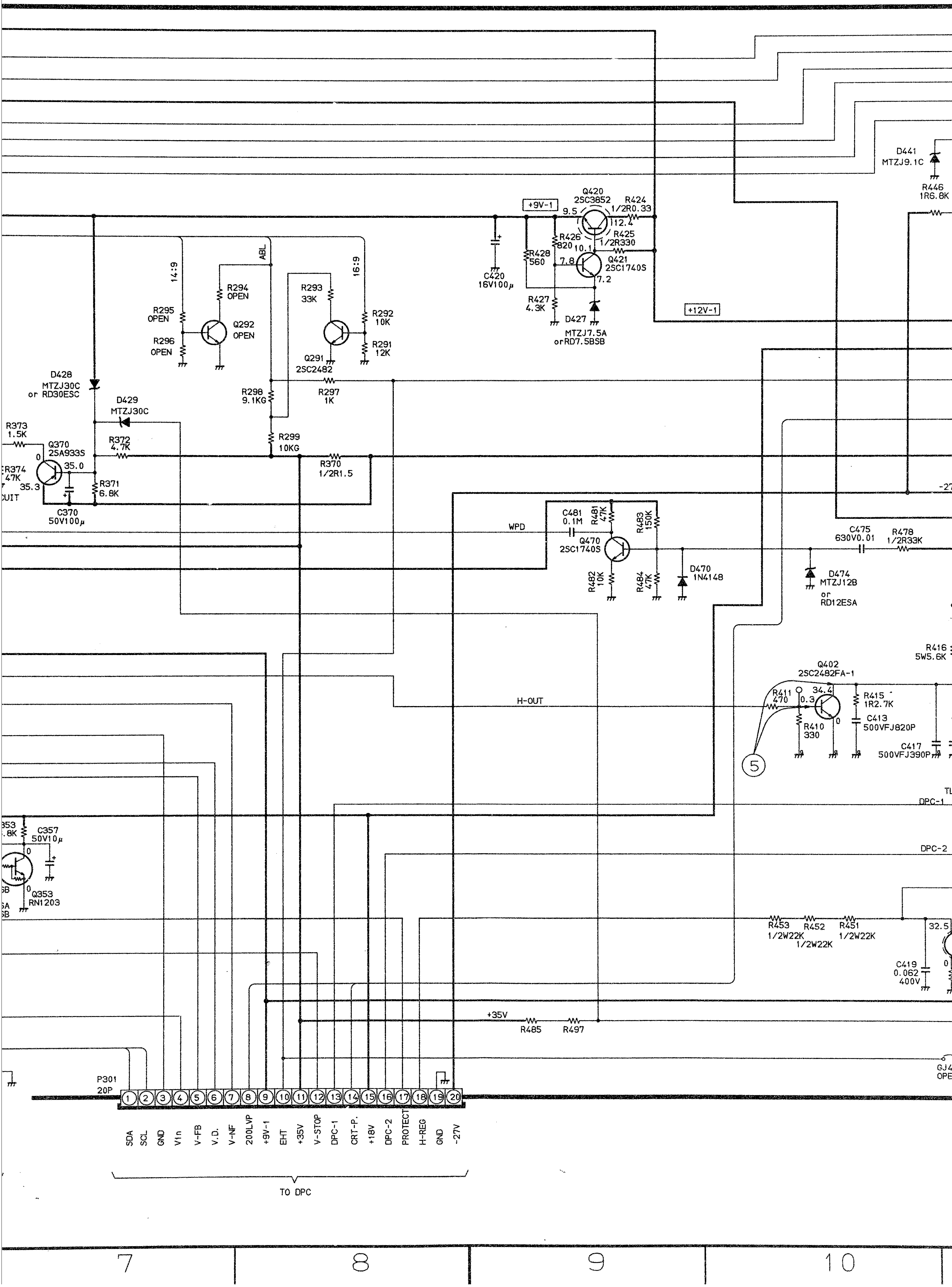


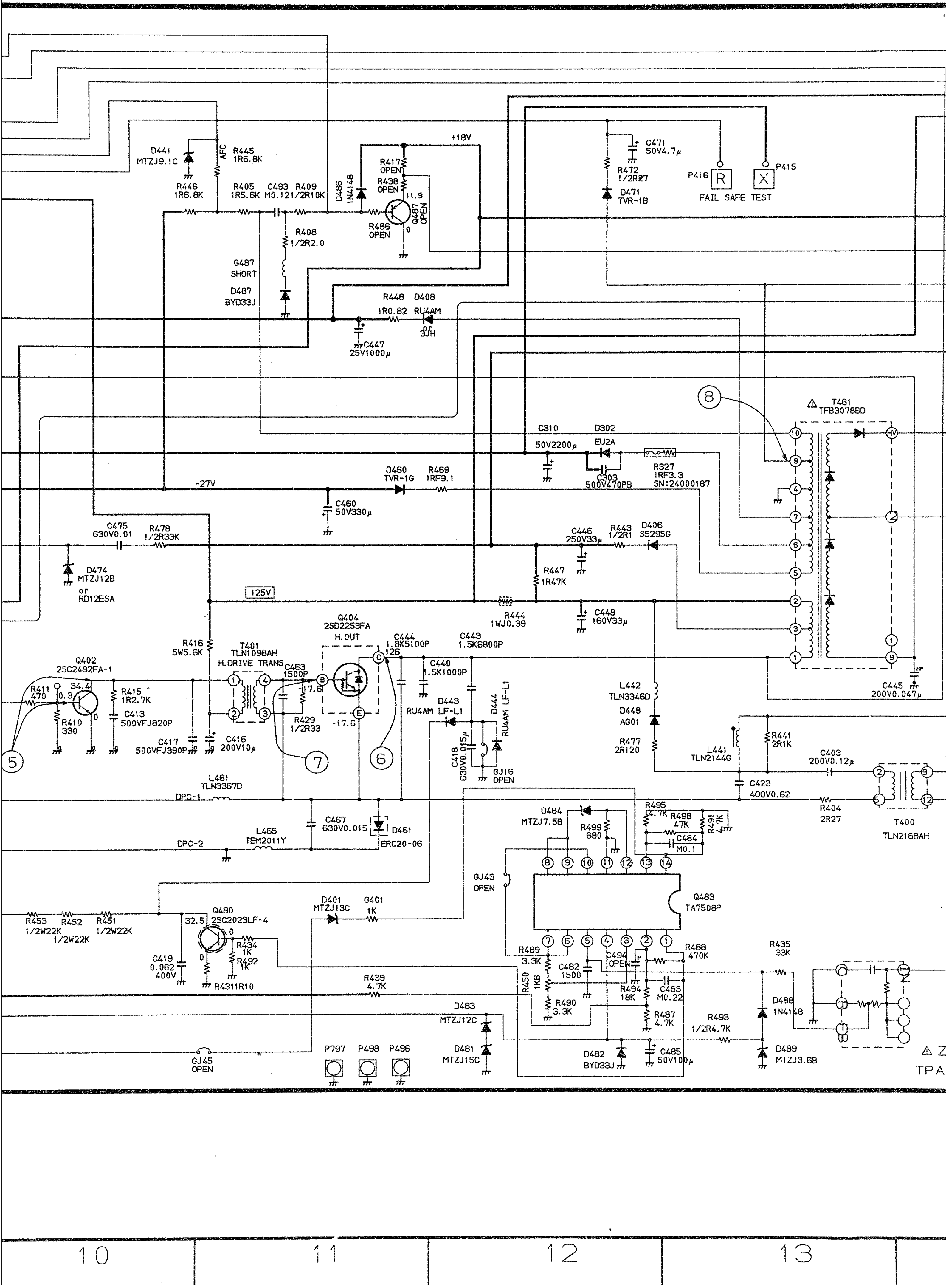
Q831
SI-3050C
SW
GND
C8307
M0.33
C8301
16V100μ
5V-4
GJ83
OPEN
R8302
27K
R8301
47K
B
C8305
16V47μ
5V-5
GJ84
OPEN
D8302 ERB12-01
A
5.0
R8304
OPEN
R8303
OPEN
C8302
50V10μ
Q832
P005PD11
9V-2
QR3
2SA10
RR66
100
RR67
220
QR3
2SA10
RR82
100
RR81
220
9V-1
QR41
2SA101
RR84
100
RR83
220
GJ85 SHORT
D385
1N4148
R387
10K
R386 4.7K
PA10A
AA
AB
AC
C
D
CP
CO
CN
CM
CL
CK
CJ
CI
CH
CG
CF
CE
CD
CC
CB
CA
+5V-1
RESET
POWER1
SCART MUTE
POWER2
E3 DET
AFT IN
OSD Ys
OSD B
OSD G
OSD R
OSD Ym
GND
SDA1
SCL1
RGB DIS
TO MICRO
DY
DX
DW
DV
DU
DT
DS
DR
DQ
DP
DO
DN
DM
DL
DK
DJ
DI
DH
DG
DF
DE
DD
DC
DB
DA
GND
PA01A
25P
SCL2
SDA2
I2C STOP
CONVER MUTE
GND
EXT SP SW
16:9ABL SW
V-BLK
SGV
SGV GND
SYNC AV
GND(SYNC)
RGB DET
nexTView
SYNC SW
VD
GND
+5V-2
TOF
YUV SW
GND
SW1
SW0
EPG POWER
TO MICRO
31
32
33
34
35
36
37
38
BB13B
8P
GND
+9V-1
GND
TO DEF
21
BB12B
8P
16:9 ABL SW
P70
4
C
AFC
R445
1R6.8K
R446
1R6.8K
R405
1R5.6K
C493
M0.121/2R10K
R409
R408
1/2R2.0
G487
SHORT
D487
BYD33J
+18V
R417
OPEN
R438
OPEN
D486
1N4148
11.9
Q487
OPEN
R486
OPEN
0
R448
1R0.82
D408
RU4AM
3JH
C447
25V1000μ
C471
50V4.7μ
R472
1/2R27
D471
TVR-1B
P416
R
X
P415
FAIL SAFE TEST
P903
9
R436
1/4W220K

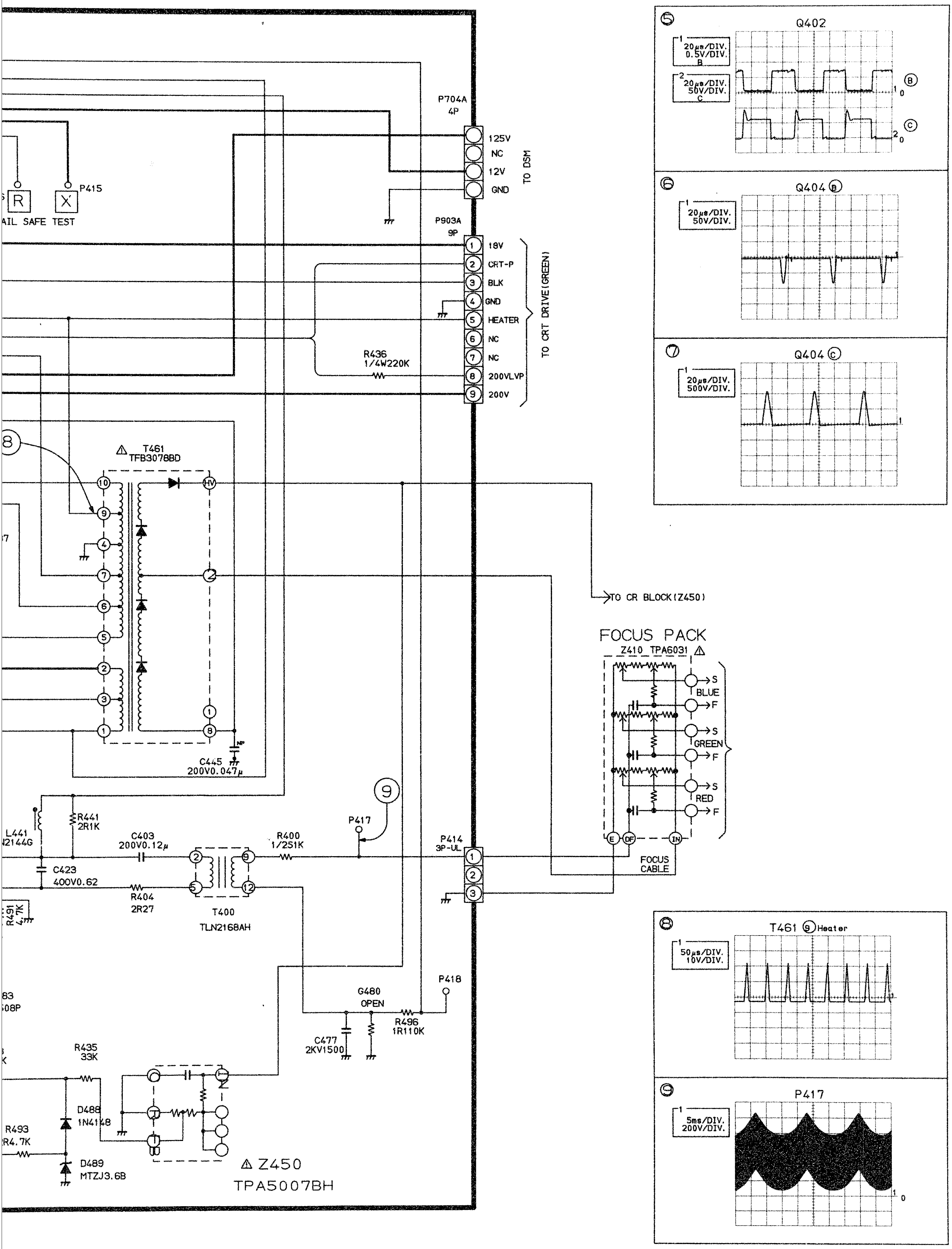

R8301
47K
RB12-01
C8302
50V10μ
Q832
P005PD11
P807B
5P
52 +3V-1
51
50
P861B
RR71
3.3K
QR37
2SA1015Y
DR61
1N4148
QR36
2SC1815Y
RR63
3.3K
RR66
100
RR67
220
RR65
1K
RR64
1.5K
RR72
3.3K
QR39
2SA1015Y
RR82
100
DR62
1N4148
QR38
2SC1815Y
RR68
3.3K
RR81
220
RR70
1K
RR69
1.5K
9V-1
QR41
2SA1015Y
RR73
3.3K
RR84
100
DR63
1N4148
QR40
2SC1815Y
RR87
3.3K
RR83
220
RR85
1K
RR86
1.5K
QR35
2SC1815Y
RR88
100
RR62
1K
RR61
OPEN
8 CONVER G
7 GND
6 CONVER R
5 CONVER B
4 GND
3 CONVER Ys
2 CONVER MUTE
1 I2C STP
TO CONV.
P702A
8P
GJ85 SHORT
5 POWER1
4 RESET
3 +5V-1
2 GND
1 H Vcc
TO POWER
P804A
D462
1N4148
R462
1K
R386 4.7K
PA10A
AA AB AC C
DG DF DE DD DC DB DA
+5V-2
TOF
YUV SW
GND
SW1
SW0
EPG POWER
BB13B
8P
31 32 33 34 35 36 37 38
GND
+9V-1
GND
TO DEF
BB12B
8P
21 22 23 24 25 26 27 28
16:9 ABL SW
14:9 ABL SW
ABL
VD
WPD
AFC
SDA2
SCL2
TO DEF
BB11B
8P
11 12 13 14 15 16 17 18
+32V
+1EV
GND
H OUT
GND
V STP
H BLK
GND
TO DEF
P704A
4P
125V
NC
12V
GND
TO DSM
P415
P903A
9P
1 18V
2 CRT-P
3 BLK
4 GND
5 HEATER
6 NC
7 NC
8 200VLVP
9 200V
TO CRT DRIVE(GREEN)
R436
1/4W220K
⑤
Q402
1 20μs/DIV. 0.5V/DIV. B
2 20μs/DIV. 50V/DIV. C
Ⓑ
Ⓒ
⑥
Q404 Ⓑ
1 20μs/DIV. 50V/DIV.
⑦
Q404 Ⓒ
1 20μs/DIV. 500V/DIV.
C
D
E
F
G
H


G
H
I
J
K
L
1
2
3
4
Q360
TA75558S
VERTICAL DYNAMIC FOCUS
Vcc
GND
Vcc
+12V-1
12.0
0
12.0
Q361
2SC4256
V-PARA AMP
AC
C362 0.1
R362 750K
C363 16V10µ
R367 7.5K
R368 18K
R356 5.6K
R369 1K
R354 2.2K
R361 11K
R360 1K
R363 10K
R364 10K
R365 10K
R366 10K
C364 16V10µ
C361 50V10µ
C360 25V10µ
D360 MTZJ6.8A
P401
R390 1R560
P402
R391 1R560
P403
R392 1R560
L470 OPEN
R475 OPEN
GJ41 SHORT
GJ42 SHORT
Q301
LA7833S
GND
OUT
IN
R303 1/2R 1.2
C311 500V560P
C313 100VM0.22
C314 M0.01
C309 100P
D312 DEL
R311 DEL
R312 OPEN
D301 EU2A or ERB44-06
R301 1K
C308 50V220µ
L301 TEM2011Y
D332 SC570A
R307 220KG
R306 56KG
C305 50V2.2µ
C306 35V3300µ
R304 22KG
R313 15KG
R305 1R0.82
③④
Q301
5ms/DIV. 0.5V/DIV.
5ms/DIV. 20V/DIV.
④ in
② out
R101 1R22K
GJ44
BB21A 8P
BB22A
BB11A 8P
GND
GND
GND
+125V
+125V
+125V
+18V
GND
12V-2
12V-2
GND
GND
X-RAY
PROTECT
+32V
+18V
GND
H OUT
GND
V STP
TO POWER
TO POWER
TO SIGNAL


IC FOCUS
Vcc
⑦ ⑧ ⑨
12.0
Q361
2SC4256
V-PARA AMP
Z470
TPA6032AH
or TPA6025A
AC
DC
GND
R357
1R110K
R367
7.5K
R368 18K
R356 5.6K
R369 1K
R354 2.2K
R366
0K
14:9
R295
OPEN
R296
OPEN
D428
MTZJ30C
or RD30ESC
D429
MTZJ30C
Q301
LA7833S
GND OUT IN VCC
① ② ③ ④ ⑤ ⑥ ⑦
0 17.1 34.6 0.9 0.8 34.7 1.5
R303
1/2R 1.2
C313
100VM0.22
C311
500V560P
C314
M0.01
C309
100P
③
D371
1N4148
or 1SS120
D370
MTZJ5.6B
or RD5.6BSB
R375
1K
R373
1.5K
C371
35V10μ
R374
47K
Q370
2SA933S
0
35.0
35.3
R372
4.7K
R371
6.8K
C370
50V100μ
FAIL SAFE CIRCUIT
D312
DEL
R311
DEL
R312
OPEN
R301
1K
D301
EU2A
or
ERB44-06
D308
ERB12-02
-01RK
C320
50V100μ
C308
50V220μ
R308
1R390
D309
ERB12-02
L301
TEM2011Y
D332
SC570A
R336
2R270
R307
220KG
R306
56KG
C305
50V2.2μ
C306
35V3300μ
C307
100VM0.047
24617858E
R304
22KG
R313
15KG
R305
1R0.82
R352
2.2K
R353
6.8K
C357
50V10μ
D354
1N4148
7.3
0
0
D353
MTZJ5.6B
or
RD5.6ESA
UZ5.6BSB
Q353
RN1203
BB11A
8P
① ② ③ ④ ⑤ ⑥ ⑦ ⑧
+32V
+18V
GND
H OUT
GND
V STP
H BLK
GND
TO SIGNAL
BB12A
① ② ③ ④ ⑤ ⑥ ⑦ ⑧
16:9 ABL SW
14:9 ABL SW
ABL
VD
WPD
AFC
SDA
SCL
TO SIGNAL
BB13A
8P
① ② ③ ④ ⑤ ⑥ ⑤ ⑥
GND
+9V-1
GND
TO SIGNAL
P701A
① ② ③ ④ ⑤ ⑥
VD
PROTECT
SDA
SCL
AFC
GND
TO CONV
P301
20P
① ② ③ ④ ⑤
SDA
SCL
GND
Vin
V-FB
4
5
6
7


D441
MTZJ9.1C
R446
1R6.8K
Q420
2SC3852
+9V-1
9.5
R424
1/2R0.33
12.4
R426
820
10.1
R425
1/2R330
R428
560
7.8
Q421
2SC1740S
7.2
C420
16V100µ
R427
4.3K
D427
MTZJ7.5A
orRD7.5BSB
+12V-1
14:9
ABL
16:9
R294
OPEN
R293
33K
R295
OPEN
Q292
OPEN
R292
10K
R296
OPEN
R291
12K
Q291
2SC2482
D428
MTZJ30C
or RD30ESC
R298
9.1KG
R297
1K
D429
MTZJ30C
R373
1.5K
Q370
2SA933S
R372
4.7K
R299
10KG
R374
47K
35.0
35.3
R370
1/2R1.5
R371
6.8K
C370
50V100µ
WPD
C481
0.1M
R481
47K
R483
150K
Q470
2SC1740S
R482
10K
R484
47K
D470
1N4148
C475
630V0.01
R478
1/2R33K
D474
MTZJ12B
or
RD12ESA
-27
R416
5W5.6K
Q402
2SC2482FA-1
H-OUT
R411
470
34.4
0.3
R415
1R2.7K
R410
330
0
C413
500VFJ820P
C417
500VFJ390P
⑤
DPC-1
DPC-2
R353
.8K
C357
50V10µ
0
Q353
RN1203
R453
1/2W22K
R452
1/2W22K
R451
1/2W22K
32.5
C419
0.062
400V
+35V
R485
R497
GJ4
OPE
P301
20P
①②③④⑤⑥⑦⑧⑨⑩⑪⑫⑬⑭⑮⑯⑰⑱⑲⑳
SDA
SCL
GND
Vin
V-FB
V.D.
V-NF
200LVP
+9V-1
EHT
+35V
V-STOP
DPC-1
CRT-P.
+18V
DPC-2
PROTECT
H-REG
GND
-27V
TO DPC
7
8
9
10


D441
MTZJ9.1C
AFC
R445
1R6.8K
R446
1R6.8K
R405
1R5.6K
C493
M0.12
R409
1/2R10K
+18V
D486
1N4148
R417
OPEN
R438
OPEN
11.9
Q487
OPEN
R486
OPEN
0
R408
1/2R2.0
G487
SHORT
D487
BYD33J
R448
1R0.82
D408
RU4AM
3μH
C447
25V1000μ
C471
50V4.7μ
R472
1/2R27
D471
TVR-1B
P416
R
X
P415
FAIL SAFE TEST
⑧
T461
TFB3078BD
C310
50V2200μ
D302
EU2A
C303
500V470PB
R327
1RF3.3
SN:24000187
HV
-27V
D460
TVR-1G
R469
1RF9.1
C460
50V330μ
C475
630V0.01
R478
1/2R33K
D474
MTZJ12B
or
RD12ESA
C446
250V33μ
R443
1/2R1
D406
S5295G
R447
1R47K
125V
R444
1WJ0.39
C448
160V33μ
R416
5W5.6K
Q402
2SC2482FA-1
T401
TLN1098AH
H.DRIVE TRANS
Q404
2SD2253FA
H.OUT
C444
1.8K5100P
126
C443
1.5K6800P
C440
1.5K1000P
C445
200V0.047μ
R411
470
34.4
0.3
R415
1R2.7K
C413
500VFJ820P
R410
330
0
C463
1500P
17.6
R429
1/2R33
-17.6
D443
RU4AM LF-L1
D444
RU4AM LF-L1
C418
630V0.015μ
GJ16
OPEN
L442
TLN3346D
D448
AG01
R477
2R120
L441
TLN2144G
R441
2R1K
C403
200V0.12μ
C423
400V0.62
R404
2R27
T400
TLN2168AH
C417
500VFJ390P
C416
200V10μ
⑤
⑦
⑥
L461
TLN3367D
DPC-1
C467
630V0.015
D461
ERC20-06
L465
TEM2011Y
DPC-2
D484
MTZJ7.5B
R499
680
R495
4.7K
R498
47K
R491
4.7K
C484
M0.1
GJ43
OPEN
Q483
TA7508P
R453
1/2W22K
R452
1/2W22K
R451
1/2W22K
Q480
2SC2023LF-4
32.5
D401
MTZJ13C
G401
1K
R434
1K
R492
1K
C419
0.062
400V
R4311R10
R489
3.3K
R450
1KB
C482
1500
C494
OPEN
R488
470K
R490
3.3K
R494
18K
C483
M0.22
R487
4.7K
R435
33K
R439
4.7K
D483
MTZJ12C
D481
MTZJ15C
R493
1/2R4.7K
D488
1N4148
D489
MTZJ3.6B
D482
BYD33J
C485
50V100μ
GJ45
OPEN
P797
P498
P496
⚠ Z
TPA
10
11
12
13


P704A
4P
125V
NC
12V
GND
TO DSM
P415
R
X
AIL SAFE TEST
P903A
9P
18V
CRT-P
BLK
GND
HEATER
NC
NC
200VLVP
200V
TO CRT DRIVE(GREEN)
R436
1/4W220K
⑧
T461
TFB3078BD
HV
C445
200V0.047μ
TO CR BLOCK(Z450)
FOCUS PACK
Z410 TPA6031
BLUE
GREEN
RED
S
F
E
DF
IN
FOCUS CABLE
⑨
P417
L441
R441
2R1K
C403
200V0.12μ
R400
1/2S1K
P414
3P-UL
C423
400V0.62
R404
2R27
T400
TLN2168AH
R491
4.7K
G480
OPEN
P418
C477
2KV1500
R496
1R110K
R435
33K
D488
1N4148
R493
R4.7K
D489
MTZJ3.6B
Z450
TPA5007BH
⑤
Q402
20μs/DIV.
0.5V/DIV.
B
20μs/DIV.
50V/DIV.
C
Ⓑ
Ⓒ
⑥
Q404 Ⓑ
20μs/DIV.
50V/DIV.
⑦
Q404 Ⓒ
20μs/DIV.
500V/DIV.
⑧
T461 ⑨ Heater
50μs/DIV.
10V/DIV.
⑨
P417
5ms/DIV.
200V/DIV.

SIGNAL DEF
50/61PJ98G 1/6
PK2974

SCHEMATIC DIAGRAM MODEL : 50PJ98B (3/6)

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 3. Do not degrade the safety of the receiver through improper servicing.

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position. Set other controls for best picture.

NOTES:

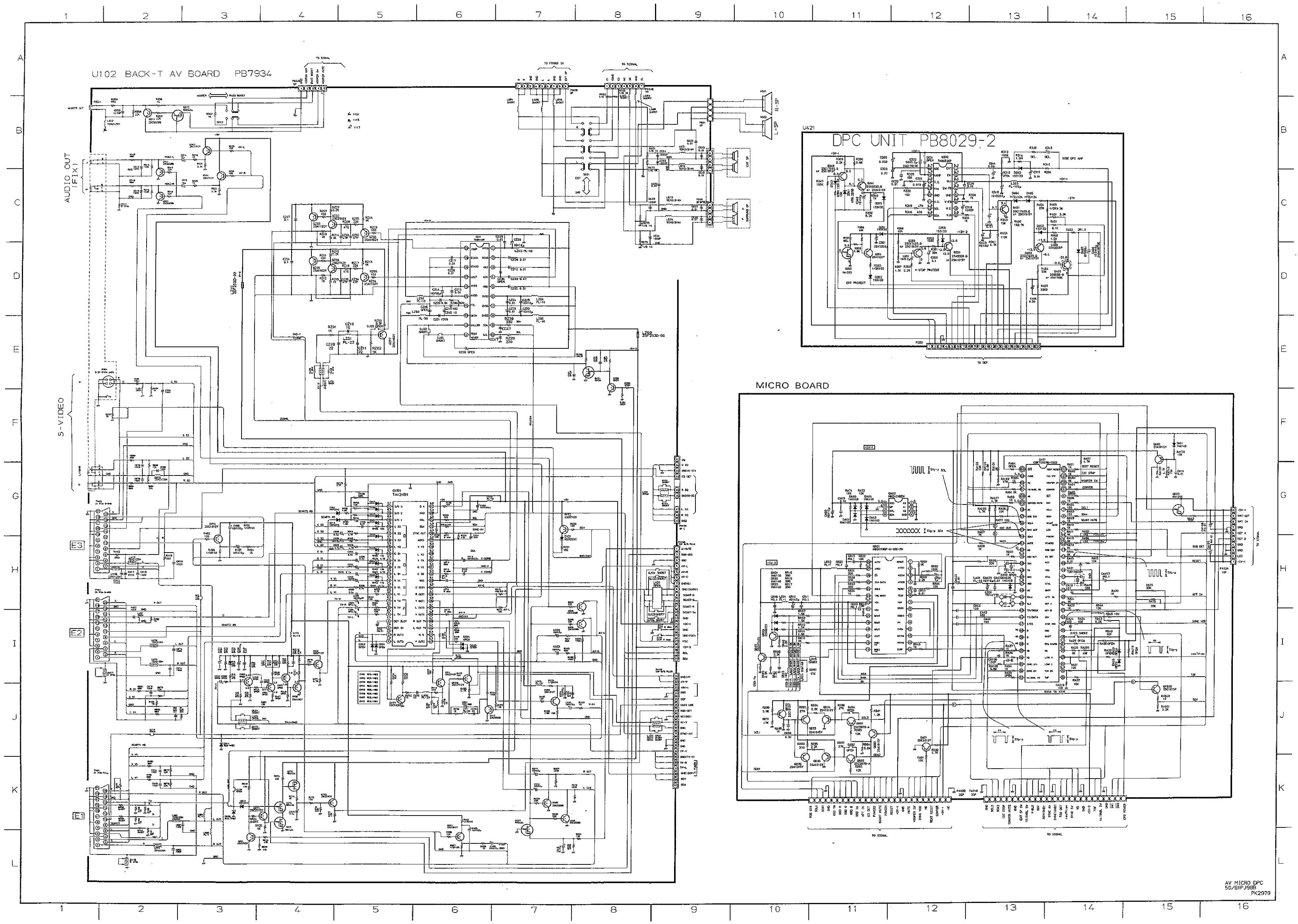
1. D.C. resistance value of a principal transformer is shown in this schematic diagram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH, and the values less than 1 in H.

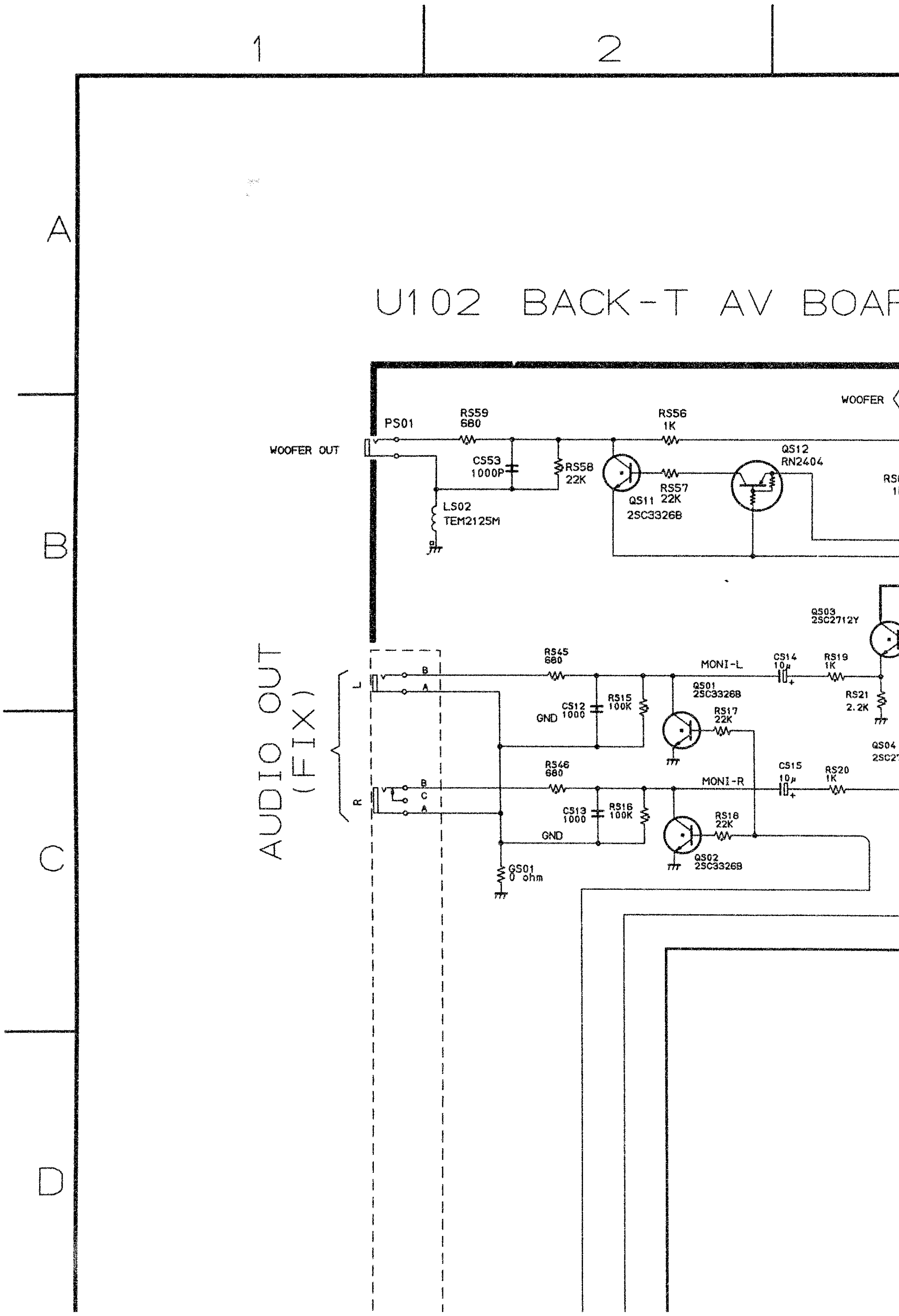
030-9915


U102 BACK-T AV BOARD PB7934
U421 DPC UNIT PB8029-2
MICRO BOARD
AUDIO OUT (FIX)
S-VIDEO
E3
E2
E1
R-SP
L-SP
TO SIGNAL
TO FRONT IN
AV MICRO DPC
50/61PJ98B
PK2979
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
A
B
C
D
E
F
G
H
I
J
K
L

SCHEMATIC DIAGRAM MODEL : 50PJ98B (3/6)

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate c
ponents which have special characteristics important for safety and should be replaced only with types id
those in the original circuit or specified in the parts list. The mounting position of replacements is to be ide
with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTIC
3. Do not degrade the safety of the receiver through improper servicing.

030-9915

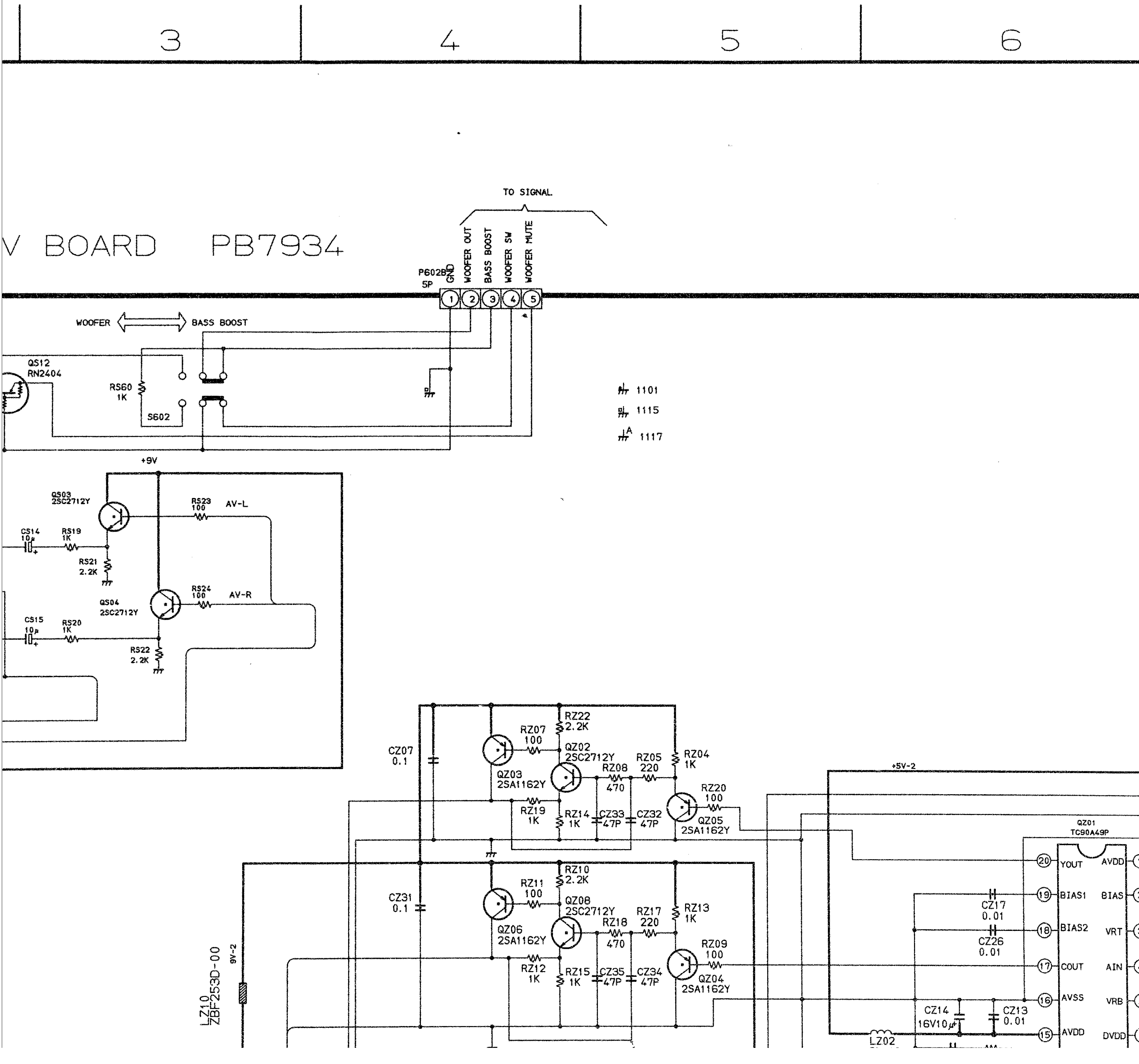

1
2
A
B
C
D
U102 BACK-T AV BOAR
WOOFER
WOOFER OUT
PS01
RS59
680
CS53
1000P
RS58
22K
LS02
TEM2125M
RS56
1K
RS57
22K
QS11
2SC3326B
QS12
RN2404
QS03
2SC2712Y
AUDIO OUT
(FIX)
L
R
B
A
C
RS45
680
RS46
680
CS12
1000
CS13
1000
RS15
100K
RS16
100K
GND
MONI-L
MONI-R
QS01
2SC3326B
QS02
2SC3326B
RS17
22K
RS18
22K
CS14
10μ
CS15
10μ
RS19
1K
RS20
1K
RS21
2.2K
QS04
GS01
0 ohm

/6)

designate com-
vith types identical to
is to be identical
TY NOTICE on page

OBSERVATION OF VOLTAGES AND WAVEFORMS

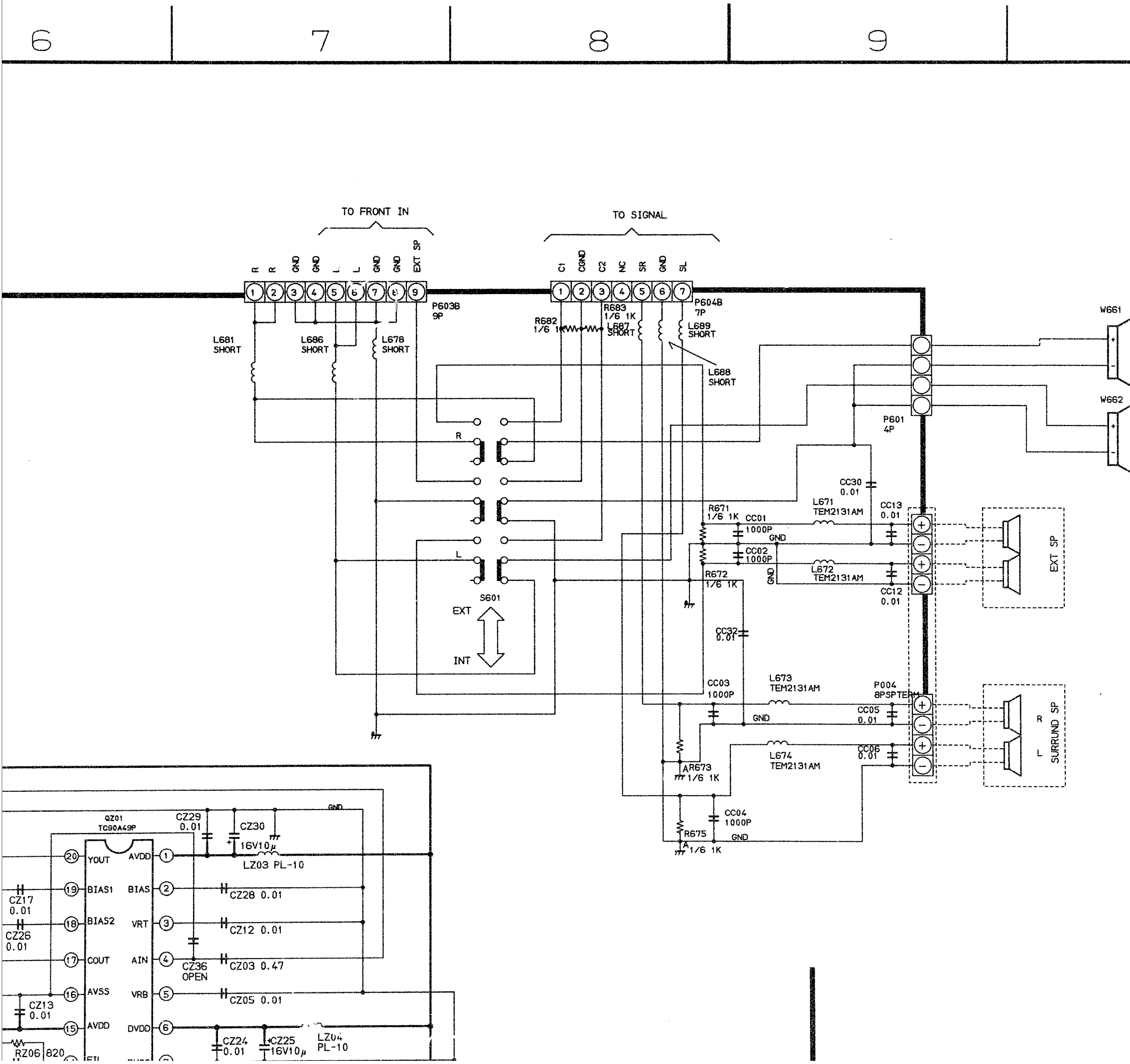
1. Voltages read with VTVM from point shown to chassis ground, line vol volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capacit
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid posit BRIGHTNESS control is almost in maximum position. Set other controls picture.


3
4
5
6
V BOARD PB7934
TO SIGNAL
P602B
5P
GND
WOOFER OUT
BASS BOOST
WOOFER SW
WOOFER MUTE
WOOFER
BASS BOOST
QS12
RN2404
RS60
1K
S602
1101
1115
1117
+9V
QS03
2SC2712Y
RS23
100
AV-L
CS14
10μ
RS19
1K
RS21
2.2K
QS04
2SC2712Y
RS24
100
AV-R
CS15
10μ
RS20
1K
RS22
2.2K
CZ07
0.1
RZ22
2.2K
RZ07
100
QZ02
2SC2712Y
QZ03
2SA1162Y
RZ08
470
RZ05
220
RZ04
1K
RZ20
100
RZ19
1K
RZ14
1K
CZ33
47P
CZ32
47P
QZ05
2SA1162Y
+5V-2
CZ31
0.1
RZ10
2.2K
RZ11
100
QZ08
2SC2712Y
QZ06
2SA1162Y
RZ18
470
RZ17
220
RZ13
1K
RZ09
100
RZ12
1K
RZ15
1K
CZ35
47P
CZ34
47P
QZ04
2SA1162Y
9V-2
LZ10
ZBF253D-00
QZ01
TC90A49P
YOUT
AVDD
BIAS1
BIAS
BIAS2
VRT
COUT
AIN
AVSS
VRB
AVDD
DVDD
20
19
18
17
16
15
CZ17
0.01
CZ26
0.01
CZ14
16V10μF
CZ13
0.01
LZ02

ground, line voltage 220
%.
nd a low capacity probe.
l.
re in mid position and
et other controls for best

NOTES:

1. D.C. resistance value of a principal transformer is shown
   gram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.



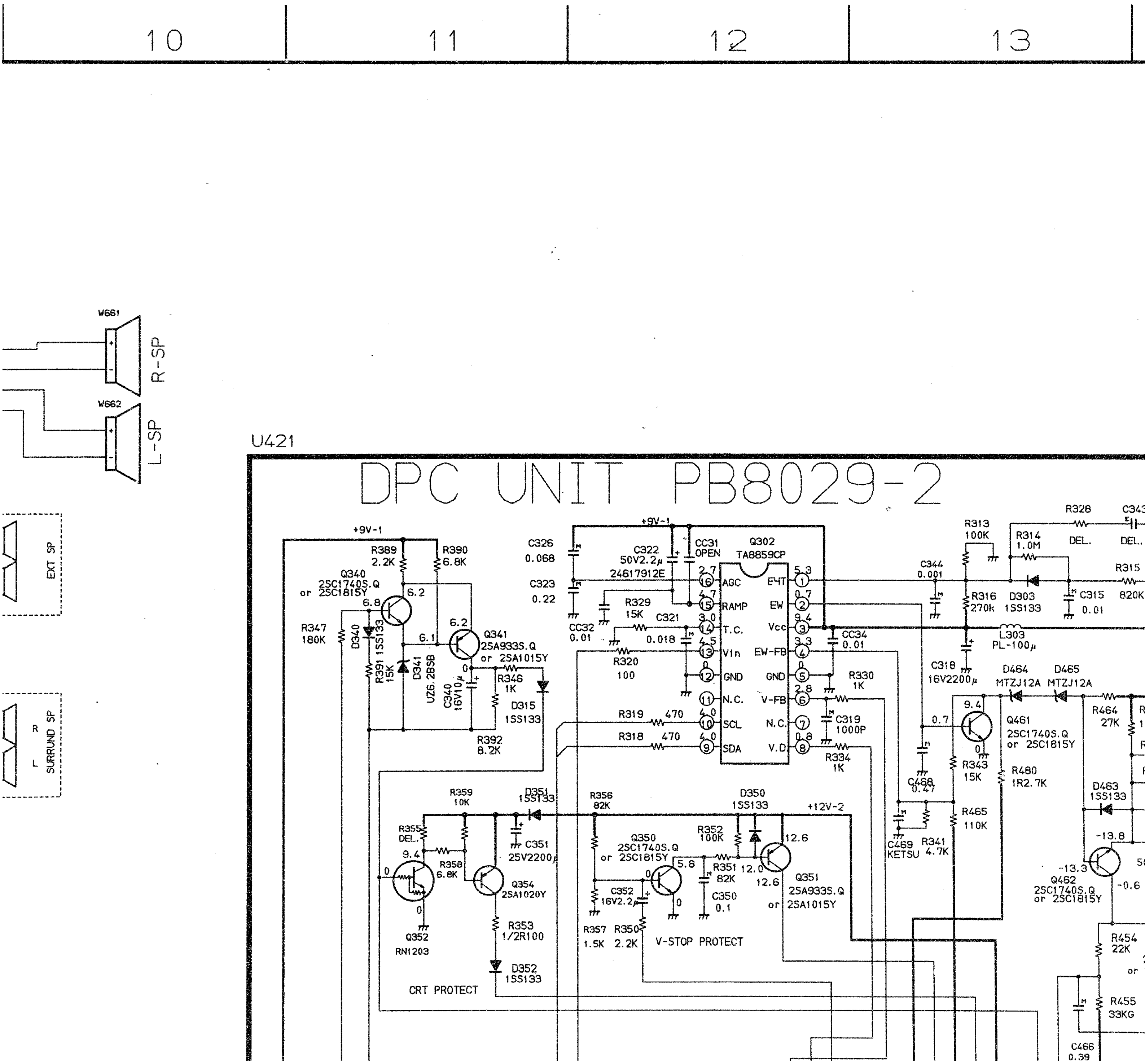
6
7
8
9
TO FRONT IN
R
R
GND
GND
L
L
GND
GND
EXT SP
P603B
9P
L681
SHORT
L686
SHORT
L678
SHORT
TO SIGNAL
C1
CGND
C2
NC
SR
GND
SL
P604B
7P
R682
1/6 1K
R683
1/6 1K
L687
SHORT
L689
SHORT
L688
SHORT
R
L
S601
EXT
INT
W661
W662
P601
4P
CC30
0.01
R671
1/6 1K
CC01
1000P
GND
L671
TEM2131AM
CC13
0.01
CC02
1000P
GND
R672
1/6 1K
L672
TEM2131AM
CC12
0.01
EXT SP
CC32
0.01
CC03
1000P
L673
TEM2131AM
P004
8PSPTERM
CC05
0.01
GND
R
L
SURRUND SP
R673
1/6 1K
L674
TEM2131AM
CC06
0.01
CC04
1000P
R675
1/6 1K
GND
QZ01
TC90A49P
CZ29
0.01
CZ30
16V10μ
LZ03 PL-10
GND
YOUT
AVDD
BIAS1
BIAS
BIAS2
VRT
COUT
AIN
AVSS
VRB
AVDD
DVDD
CZ17
0.01
CZ26
0.01
CZ28 0.01
CZ12 0.01
CZ36
OPEN
CZ03 0.47
CZ05 0.01
CZ13
0.01
CZ24
0.01
CZ25
16V10μ
LZ04
PL-10
RZ06
820

er is shown in this schematic dia-
the circuit.
ce.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUC

1. Resistance is shown in ohm, k=1,000, M=1,000,00
2. Unless other wise noted in schematic, all capacito sed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor sed in μH, and the values less than 1 in H.

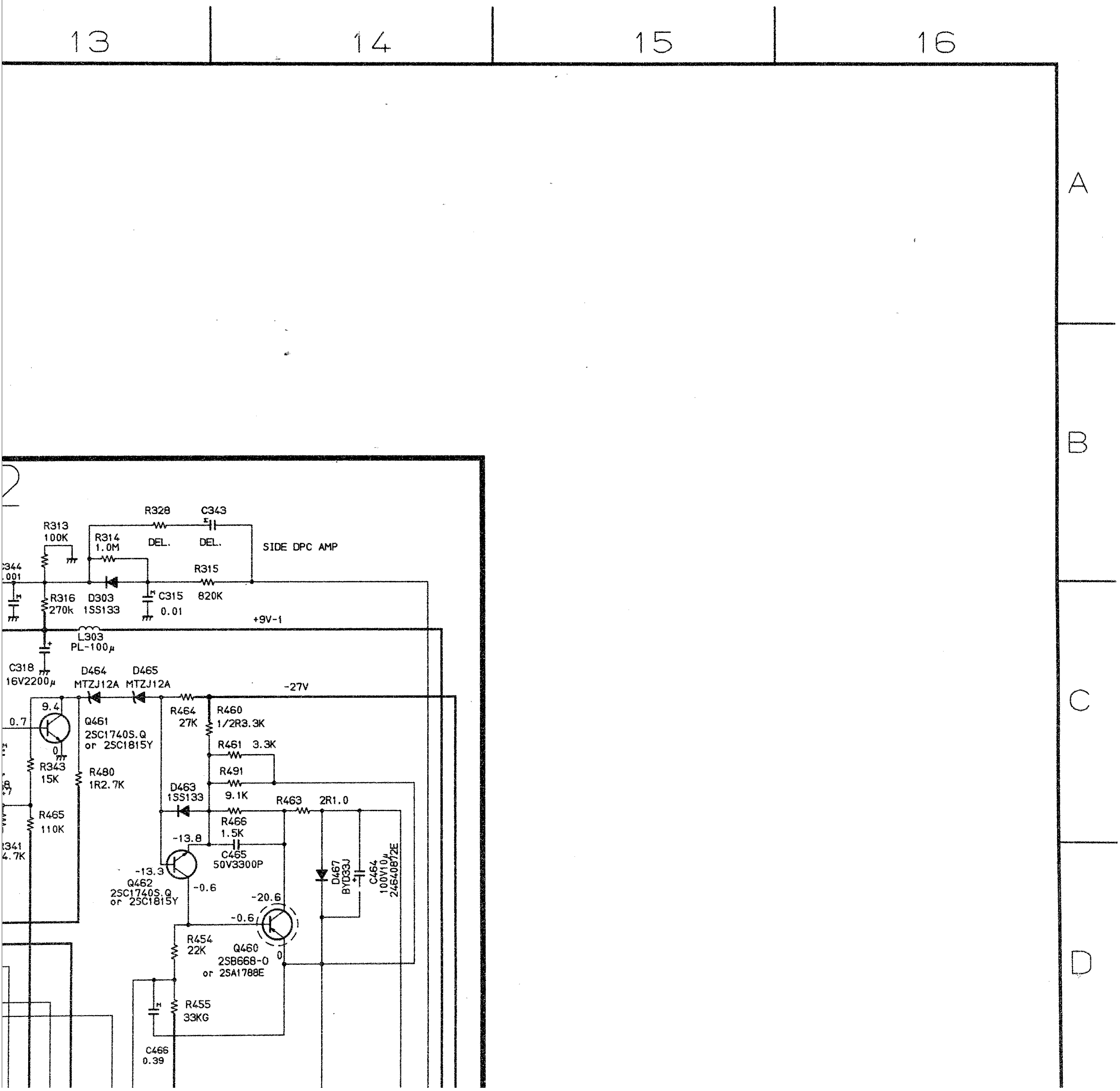

10
11
12
13
W661
R-SP
W662
L-SP
EXT SP
SURRUND SP
R
L
U421
DPC UNIT PB8029-2
+9V-1
R389 2.2K
R390 6.8K
Q340 2SC1740S.Q or 2SC1815Y
R347 180K
D340 1SS133
R391 15K
D341 UZ6.2BSB
Q341 2SA933S.Q or 2SA1015Y
C340 16V10μ
R346 1K
D315 1SS133
R392 8.2K
C326 0.068
C323 0.22
CC32 0.01
C322 50V2.2μ 24617912E
CC31 OPEN
Q302 TA8859CP
R329 15K
C321 0.018
R320 100
R319 470
R318 470
AGC
RAMP
T.C.
Vin
GND
N.C.
SCL
SDA
EHT
EW
Vcc
EW-FB
V-FB
V.D
CC34 0.01
R330 1K
C319 1000P
R334 1K
C344 0.001
R313 100K
R314 1.0M
R316 270k
D303 1SS133
C315 0.01
R328 DEL.
C343 DEL.
R315 820K
L303 PL-100μ
C318 16V2200μ
D464 MTZJ12A
D465 MTZJ12A
Q461 2SC1740S.Q or 2SC1815Y
R464 27K
R343 15K
R480 1R2.7K
C468 0.47
R465 110K
C469 KETSU
R341 4.7K
D463 1SS133
Q462 2SC1740S.Q or 2SC1815Y
R454 22K
R455 33KG
C466 0.39
R359 10K
D351 1SS133
R355 DEL.
R358 6.8K
C351 25V2200μ
Q354 2SA1020Y
Q352 RN1203
R353 1/2R100
D352 1SS133
CRT PROTECT
R356 82K
D350 1SS133
+12V-2
Q350 2SC1740S.Q or 2SC1815Y
R352 100K
R351 82K
C350 0.1
Q351 2SA933S.Q or 2SA1015Y
C352 16V2.2μ
R357 1.5K
R350 2.2K
V-STOP PROTECT

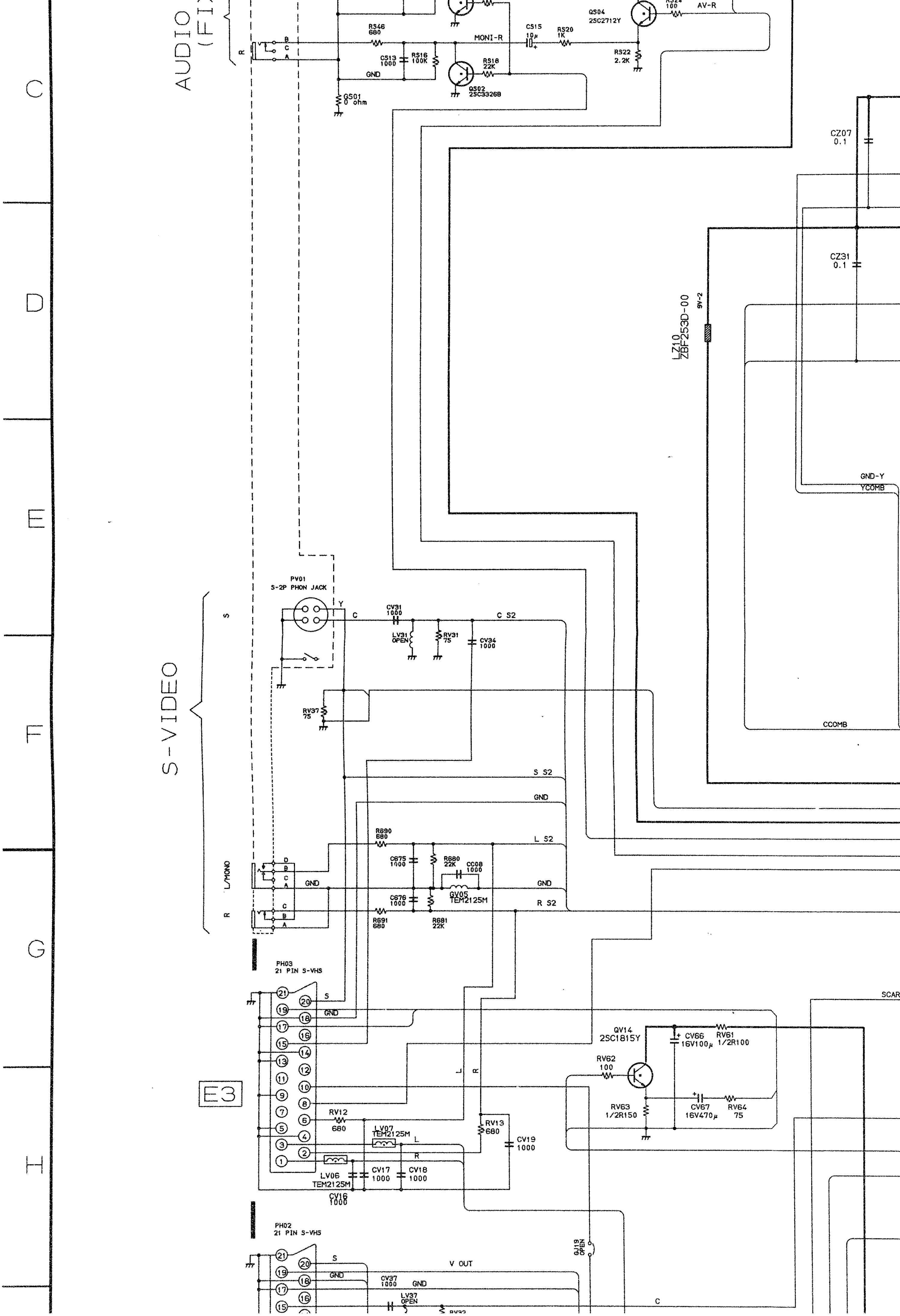
CITOR and INDUCTOR

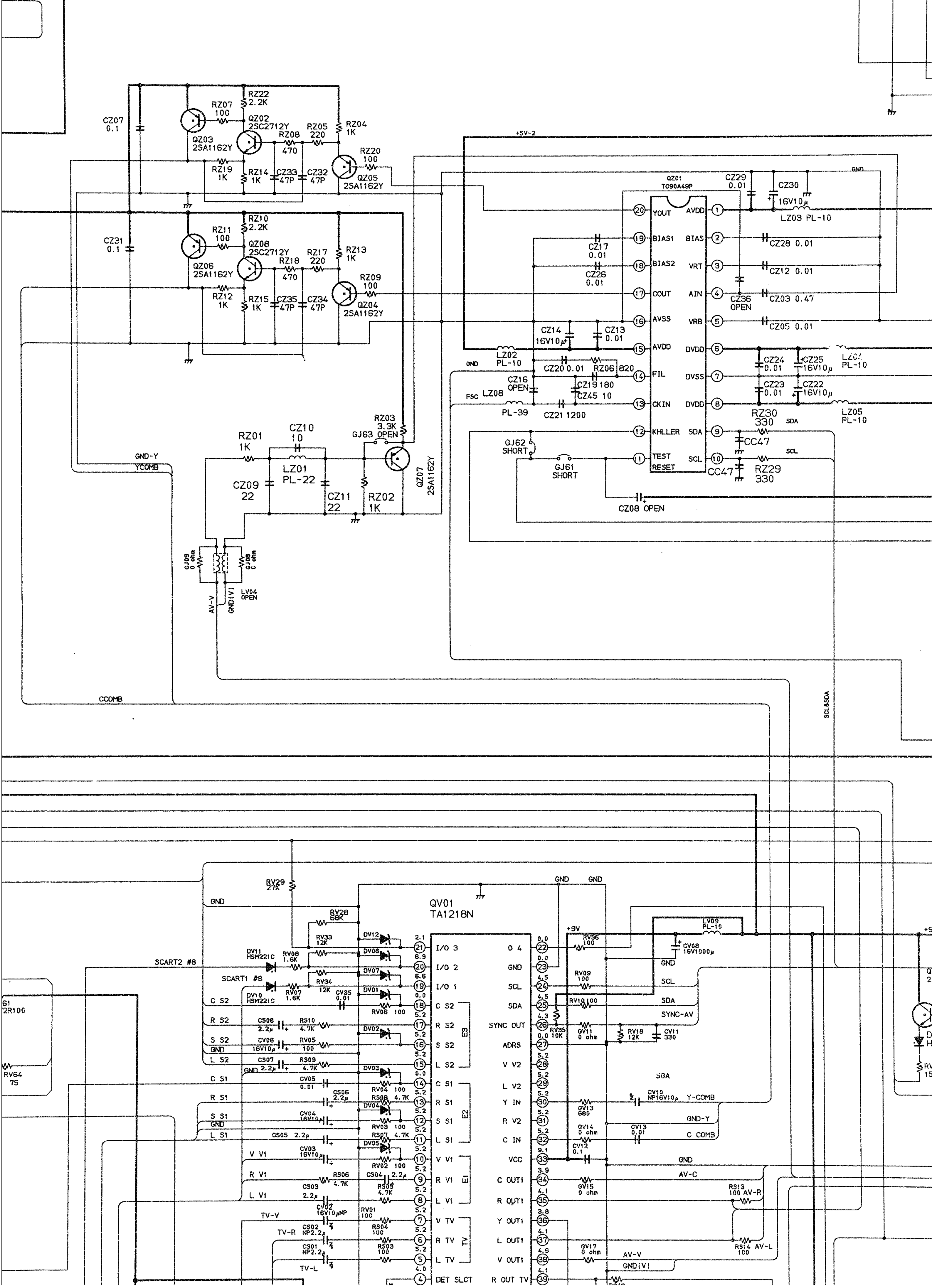
=1,000, M=1,000,000

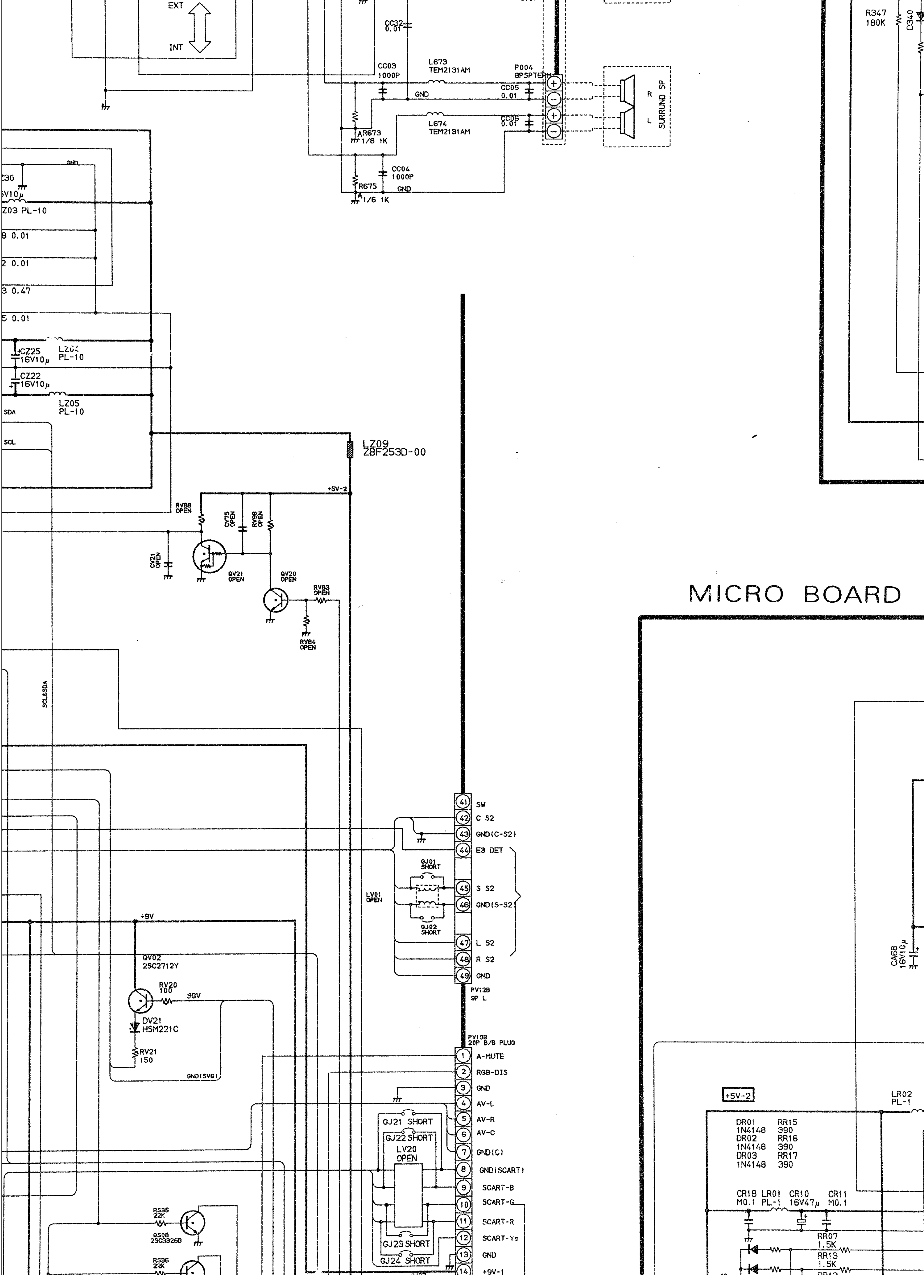
chematic, all capacitor values less than 1 are expres-
than 1 in pF.

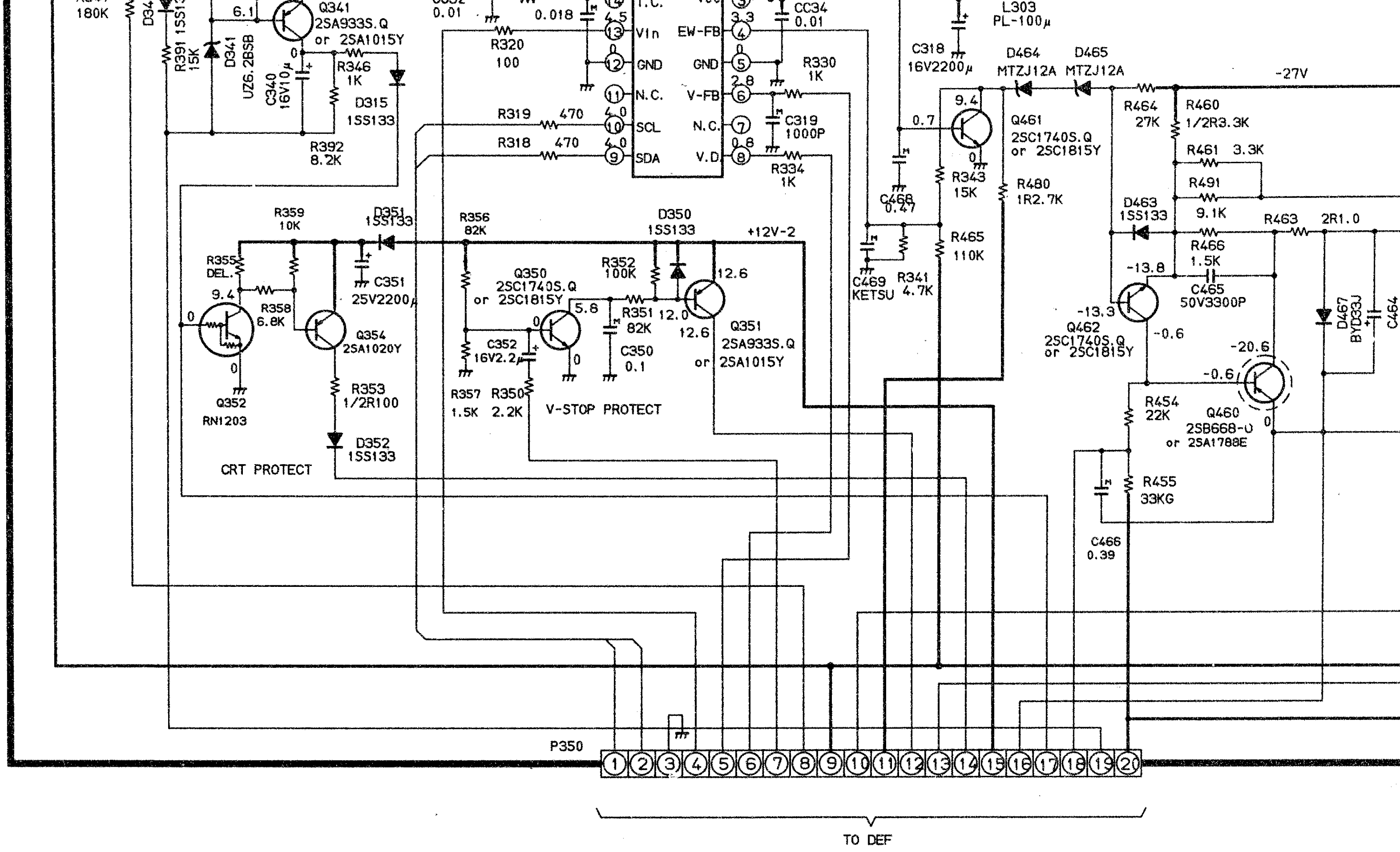
hematic, all inductor values more than 1 are expres-
than 1 in H.


13
14
15
16
A
B
C
D
R328
C343
R313
100K
R314
1.0M
DEL.
DEL.
SIDE DPC AMP
344
.001
R315
820K
R316
270k
D303
1SS133
C315
0.01
+9V-1
L303
PL-100μ
C318
16V2200μ
D464
MTZJ12A
D465
MTZJ12A
-27V
9.4
0.7
R464
27K
R460
1/2R3.3K
Q461
2SC1740S.Q
or 2SC1815Y
0
R461 3.3K
R343
15K
R480
1R2.7K
R491
9.1K
D463
1SS133
R463
2R1.0
R465
110K
R466
1.5K
341
4.7K
-13.8
C465
50V3300P
D467
BYD33J
C464
100V10μ
2464087̂2E
-13.3
Q462
2SC1740S.Q
or 2SC1815Y
-0.6
-20.6
-0.6
R454
22K
Q460
2SB668-O
or 2SA1788E
0
R455
33KG
C466
0.39

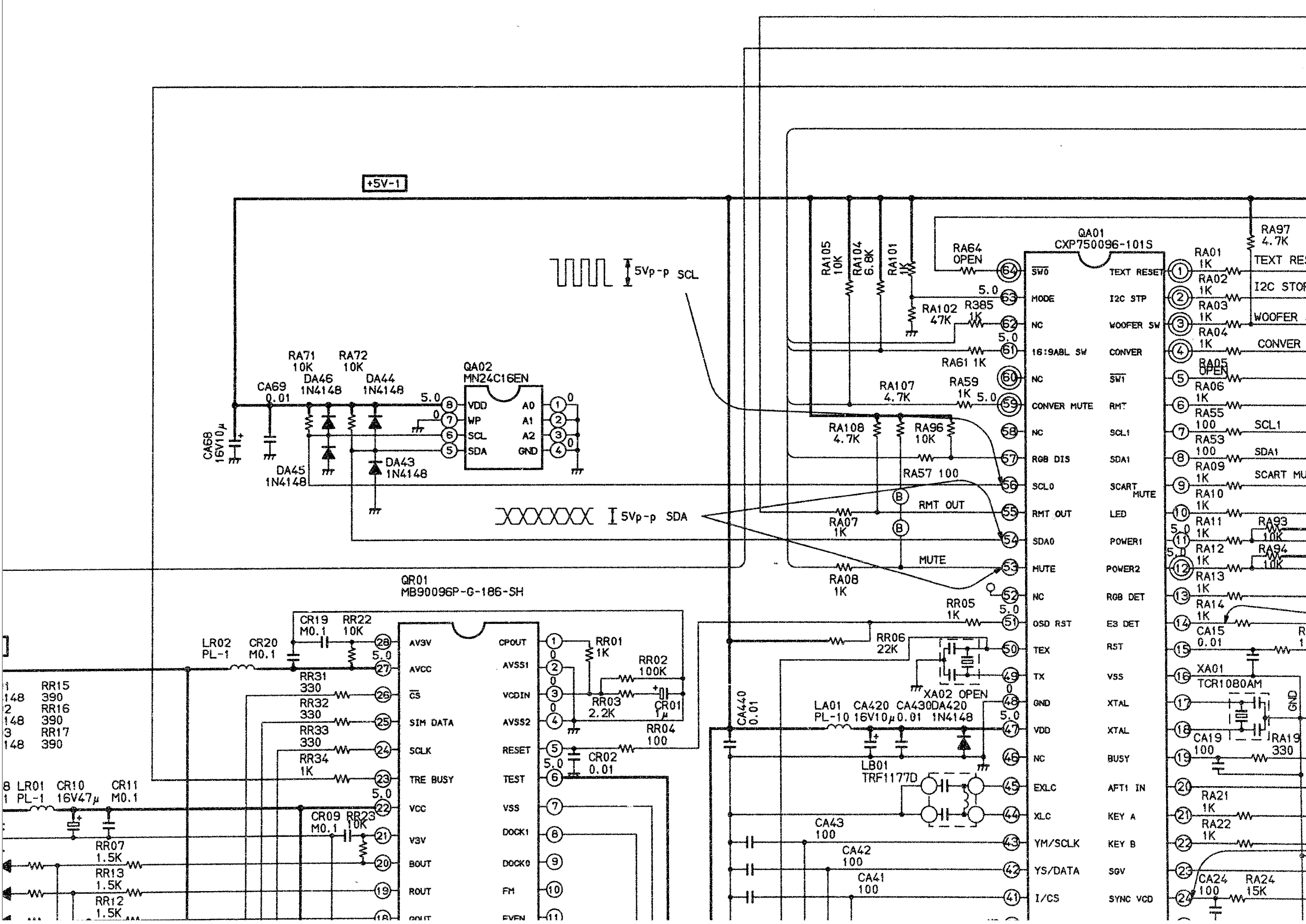

C
D
E
F
G
H
I
AUDIO
(FI
R
B
C
A
RS46
680
CS13
1000
RS16
100K
GND
GS01
0 ohm
QS02
2SC3326B
RS18
22K
MONI-R
CS15
10μ
RS20
1K
QS04
2SC2712Y
RS24
100
AV-R
RS22
2.2K
CZ07
0.1
CZ31
0.1
LZ10
ZBF253D-00
9V-2
GND-Y
YCOMB
CCOMB
S-VIDEO
S
PV01
S-2P PHON JACK
Y
C
CV31
1000
LV31
OPEN
RV31
75
CV34
1000
C S2
RV37
75
S S2
GND
R690
680
L S2
L/MONO
D
B
C
A
GND
C675
1000
R680
22K
CC08
1000
GV05
TEM2125M
GND
C676
1000
R S2
R
C
B
A
R691
680
R681
22K
PH03
21 PIN S-VHS
21
20
S
19
18
GND
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
E3
L
R
RV12
680
LV07
TEM2125M
L
R
RV13
680
CV19
1000
LV06
TEM2125M
CV17
1000
CV18
1000
CV16
1000
SCAR
QV14
2SC1815Y
CV66
16V100μ
RV61
1/2R100
RV62
100
RV63
1/2R150
CV67
16V470μ
RV64
75
PH02
21 PIN S-VHS
21
20
S
19
18
GND
17
16
15
V OUT
CV37
1000
GND
LV37
OPEN
RV32
GJ19
OPEN
C

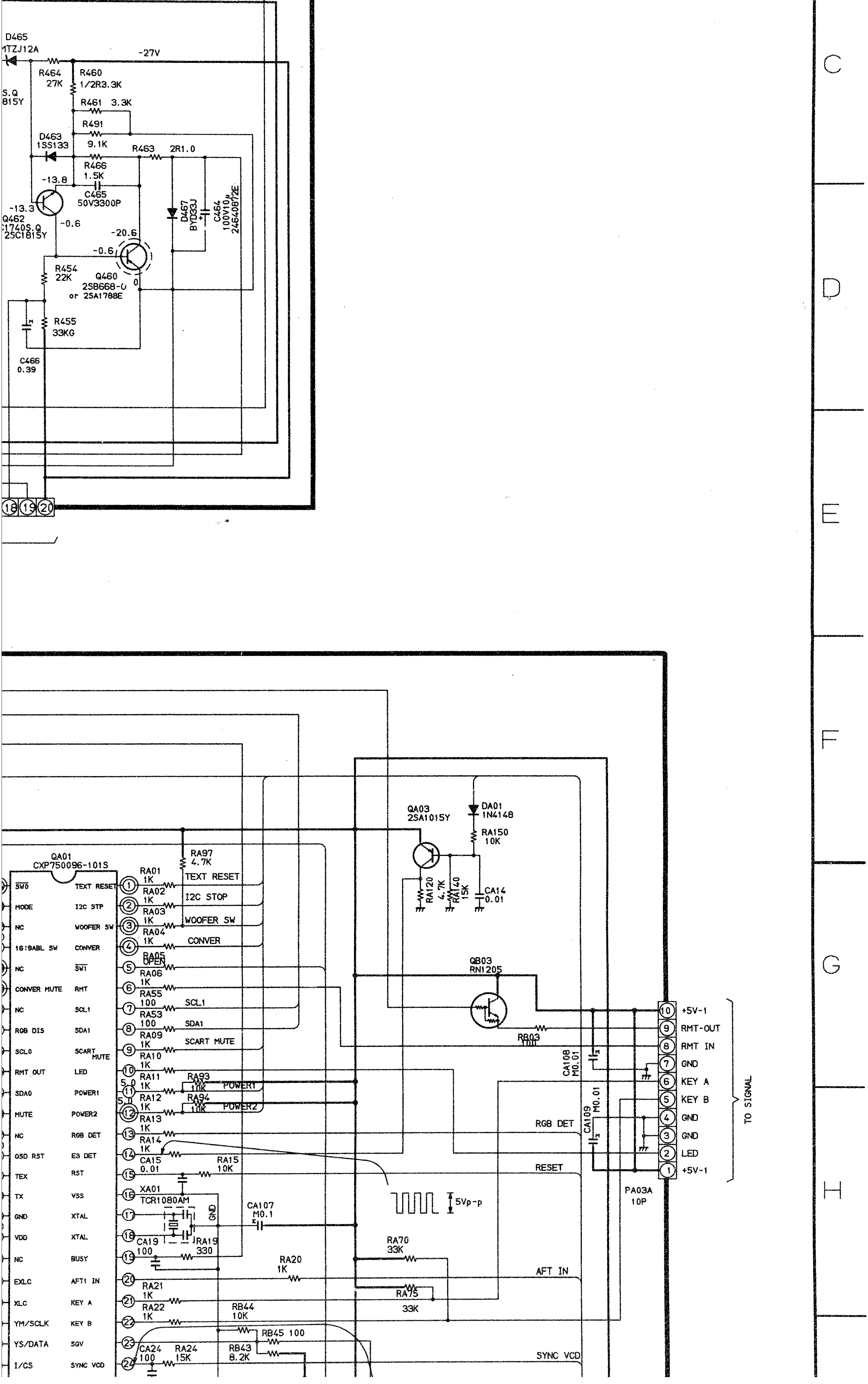

CZ07
0.1
RZ07
100
RZ22
2.2K
QZ02
2SC2712Y
QZ03
2SA1162Y
RZ08
470
RZ05
220
RZ04
1K
RZ20
100
QZ05
2SA1162Y
RZ19
1K
RZ14
1K
CZ33
47P
CZ32
47P
CZ31
0.1
RZ11
100
RZ10
2.2K
QZ08
2SC2712Y
QZ06
2SA1162Y
RZ18
470
RZ17
220
RZ13
1K
RZ09
100
QZ04
2SA1162Y
RZ12
1K
RZ15
1K
CZ35
47P
CZ34
47P
+5V-2
QZ01
TC90A49P
CZ29
0.01
CZ30
16V10μ
GND
LZ03 PL-10
YOUT
AVDD
BIAS1
BIAS
BIAS2
VRT
COUT
AIN
AVSS
VRB
AVDD
DVDD
FIL
DVSS
CKIN
DVDD
KHLLER
SDA
TEST
RESET
SCL
CZ17
0.01
CZ28 0.01
CZ26
0.01
CZ12 0.01
CZ36
OPEN
CZ03 0.47
CZ14
16V10μ
CZ13
0.01
CZ05 0.01
LZ02
PL-10
CZ24
0.01
CZ25
16V10μ
LZ04
PL-10
GND
CZ20 0.01
RZ06 820
CZ16
OPEN
CZ19 180
CZ45 10
CZ23
0.01
CZ22
16V10μ
FSC
LZ08
PL-39
CZ21 1200
RZ30
330
SDA
LZ05
PL-10
CC47
GJ62
SHORT
GJ61
SHORT
SCL
CC47
RZ29
330
CZ08 OPEN
RZ03
3.3K
GJ63 OPEN
RZ01
1K
CZ10
10
LZ01
PL-22
GND-Y
YCOMB
CZ09
22
CZ11
22
RZ02
1K
QZ07
2SA1162Y
GJ09
0 ohm
GJ08
0 ohm
LV04
OPEN
AV-V
GND(V)
CCOMB
SCL&SDA
RV29
27K
GND
GND
GND
QV01
TA1218N
RV28
68K
RV33
12K
DV12
DV06
DV07
DV01
SCART2 #8
DV11
HSM221C
RV08
1.6K
SCART1 #8
DV10
HSM221C
RV07
1.6K
RV34
12K
CV35
0.01
RV06 100
C S2
R S2
CS08
2.2μ
RS10
4.7K
DV02
S S2
GND
CV06
16V10μ
RV05
100
L S2
GND
CS07
2.2μ
RS09
4.7K
DV03
C S1
CV05
0.01
RV04 100
R S1
CS06
2.2μ
RS08 4.7K
DV04
S S1
GND
CV04
16V10μ
RV03 100
L S1
CS05 2.2μ
RS07 4.7K
DV05
V V1
CV03
16V10μ
RV02 100
R V1
RS06
4.7K
CS04 2.2μ
L V1
CS03
2.2μ
RS05
4.7K
TV-V
CV02
16V10μNP
RV01
100
TV-R
CS02
NP2.2μ
RS04
100
CS01
NP2.2μ
RS03
100
TV-L
I/O 3
I/O 2
I/O 1
C S2
R S2
S S2
L S2
C S1
R S1
S S1
L S1
V V1
R V1
L V1
V TV
R TV
L TV
DET SLCT
E3
E2
E1
TV
O 4
GND
SCL
SDA
SYNC OUT
ADRS
V V2
L V2
Y IN
R V2
C IN
VCC
C OUT1
R OUT1
Y OUT1
L OUT1
V OUT1
R OUT TV
2.1
6.9
6.6
0.0
5.2
5.2
5.2
0.0
5.2
5.2
5.2
5.2
5.2
5.2
5.2
5.2
4.0
0.0
0.0
4.5
4.5
4.3
0.7
5.2
5.2
5.2
5.2
5.2
9.1
3.9
4.1
3.8
4.1
4.6
4.1
+9V
RV36
100
LV09
PL-10
CV08
16V1000μ
GND
RV09
100
SCL
RV10 100
SDA
SYNC-AV
RV35
10K
GV11
0 ohm
RV18
12K
CV11
330
SGA
CV10
NP16V10μ
Y-COMB
GV13
680
GND-Y
GV14
0 ohm
CV13
0.01
C COMB
CV12
0.1
GND
AV-C
GV15
0 ohm
RS13
100 AV-R
RS14 AV-L
100
GV17
0 ohm
AV-V
GND(V)
RV64
75
+9

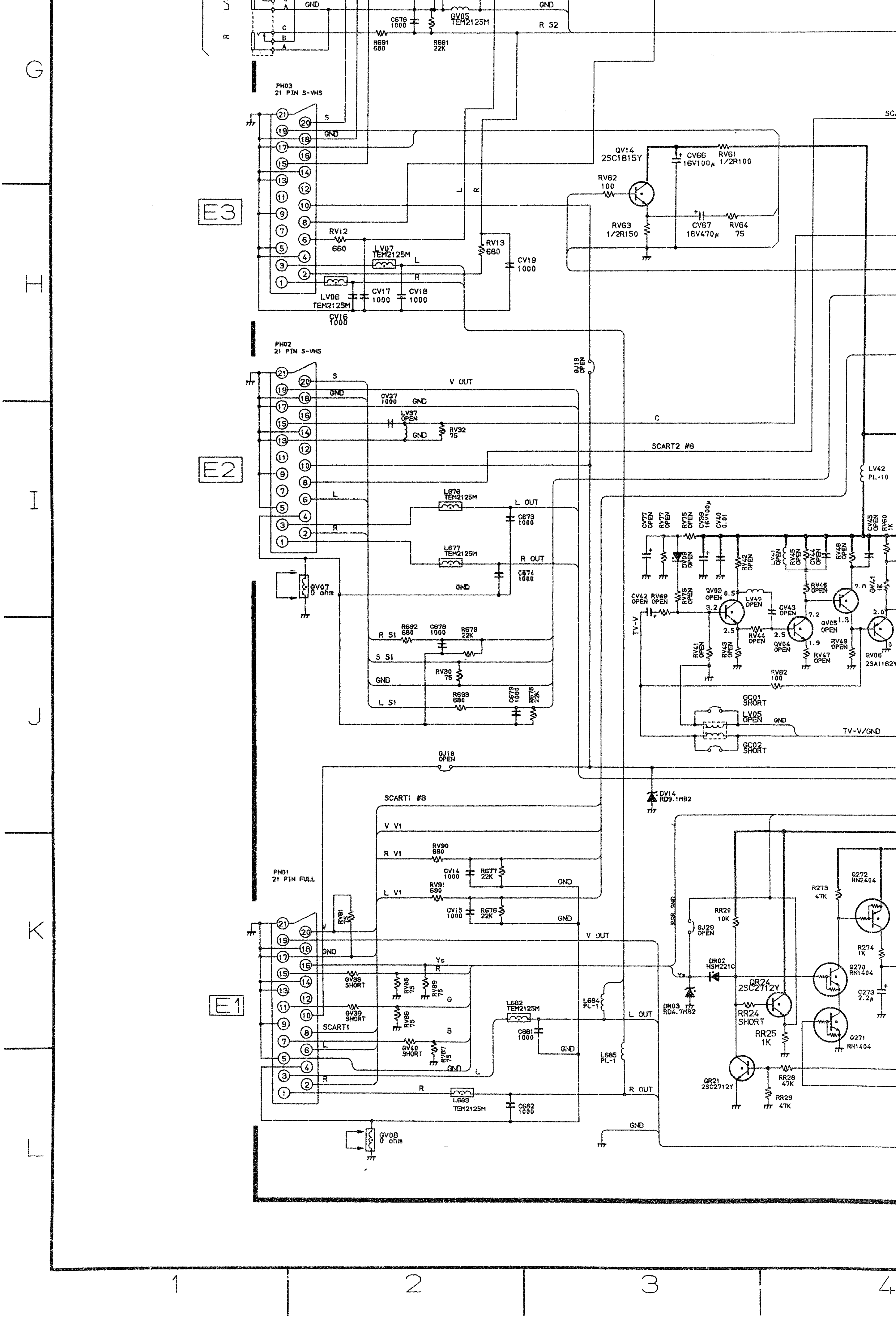

EXT
INT
CC32 0.01
CC03 1000P
L673 TEM2131AM
P004 8PSPTERM
CC05 0.01
GND
R
L
SURRUND SP
AR673 1/6 1K
L674 TEM2131AM
CC06 0.01
CC04 1000P
R675 1/6 1K
R347 180K
D340
Z30
Z03 PL-10
8 0.01
2 0.01
3 0.47
5 0.01
CZ25 16V10μ
LZ04 PL-10
CZ22 16V10μ
LZ05 PL-10
SDA
SCL
LZ09 ZBF253D-00
+5V-2
RV88 OPEN
CV75 OPEN
RV98 OPEN
CV21 OPEN
QV21 OPEN
QV20 OPEN
RV83 OPEN
RV84 OPEN
SCL&SDA
MICRO BOARD
41 SW
42 C S2
43 GND(C-S2)
44 E3 DET
GJ01 SHORT
45 S S2
46 GND(S-S2)
LV01 OPEN
GJ02 SHORT
47 L S2
48 R S2
49 GND
PV12B 9P L
+9V
QV02 2SC2712Y
RV20 100
SGV
DV21 HSM221C
RV21 150
GND(SVG)
PV10B 20P B/B PLUG
1 A-MUTE
2 RGB-DIS
3 GND
4 AV-L
5 AV-R
6 AV-C
7 GND(C)
8 GND(SCART)
9 SCART-B
10 SCART-G
11 SCART-R
12 SCART-Ys
13 GND
14 +9V-1
GJ21 SHORT
GJ22 SHORT
LV20 OPEN
GJ23 SHORT
GJ24 SHORT
RS35 22K
QS08 2SC3326B
RS36 22K
CA68 16V10μ
+5V-2
LR02 PL-1
DR01 1N4148
DR02 1N4148
DR03 1N4148
RR15 390
RR16 390
RR17 390
CR18 M0.1
LR01 PL-1
CR10 16V47μ
CR11 M0.1
RR07 1.5K
RR13 1.5K

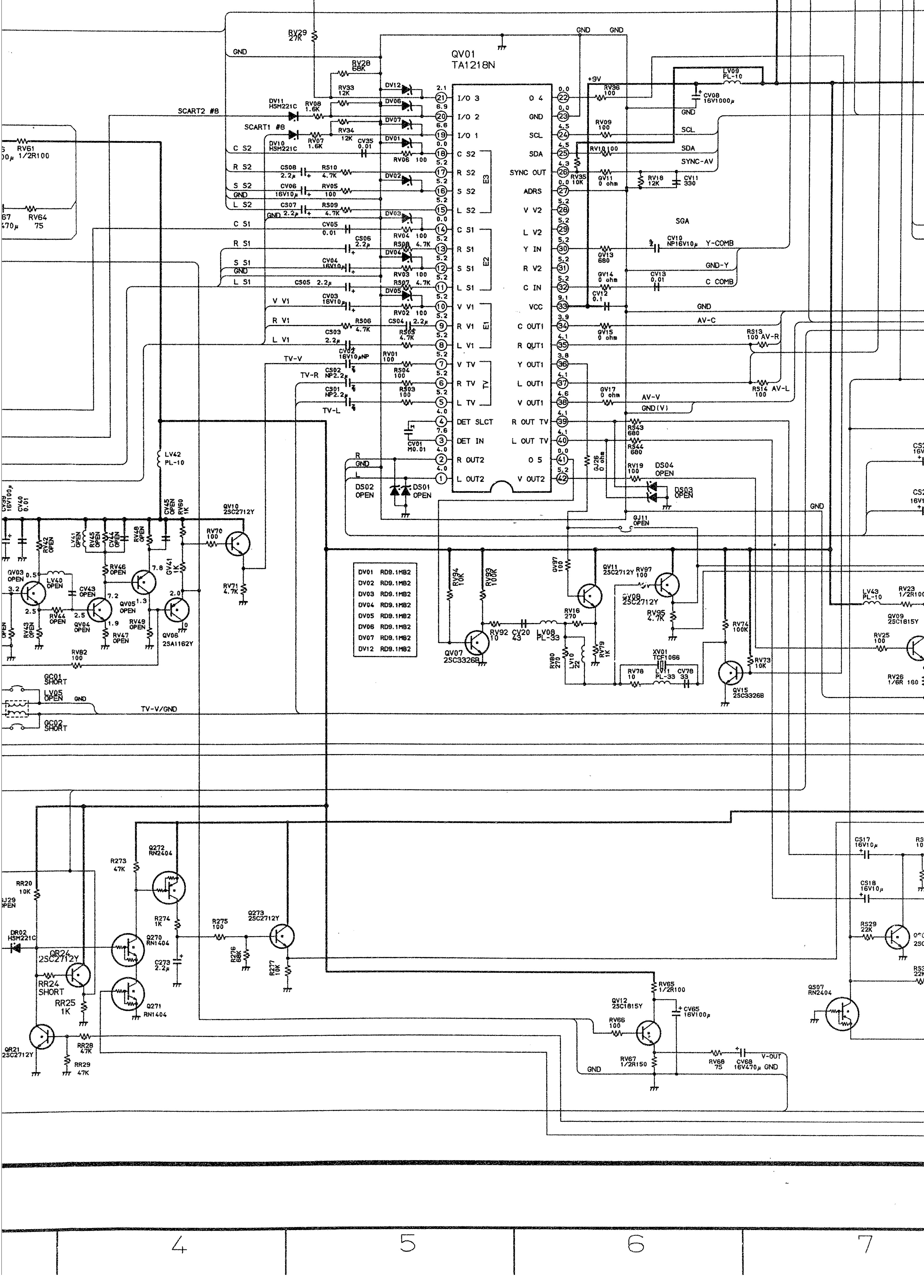

Q341 2SA933S.Q or 2SA1015Y
D341 UZ6.2BSB
R391 15K
C340 16V10μ
R346 1K
D315 1SS133
R392 8.2K
R320 100
R319 470
R318 470
Vin
GND
N.C.
SCL
SDA
EW-FB
V-FB
V.D.
CC34 0.01
R330 1K
C319 1000P
R334 1K
L303 PL-100μ
C318 16V2200μ
D464 MTZJ12A
D465 MTZJ12A
-27V
Q461 2SC1740S.Q or 2SC1815Y
R464 27K
R460 1/2R3.3K
R461 3.3K
R491 9.1K
R343 15K
R480 1R2.7K
C468 0.47
R465 110K
C469 KETSU
R341 4.7K
D463 1SS133
R466 1.5K
R463 2R1.0
C465 50V3300P
Q462 2SC1740S.Q or 2SC1815Y
D467 BYD33J
Q460 2SB668-O or 2SA1788E
R454 22K
R455 33KG
C466 0.39
R359 10K
D351 1SS133
R355 DEL.
R358 6.8K
C351 25V2200μ
Q352 RN1203
Q354 2SA1020Y
R353 1/2R100
D352 1SS133
CRT PROTECT
R356 82K
D350 1SS133
+12V-2
Q350 2SC1740S.Q or 2SC1815Y
R352 100K
R351 82K
C352 16V2.2μ
C350 0.1
Q351 2SA933S.Q or 2SA1015Y
R357 1.5K
R350 2.2K
V-STOP PROTECT
P350
TO DEF

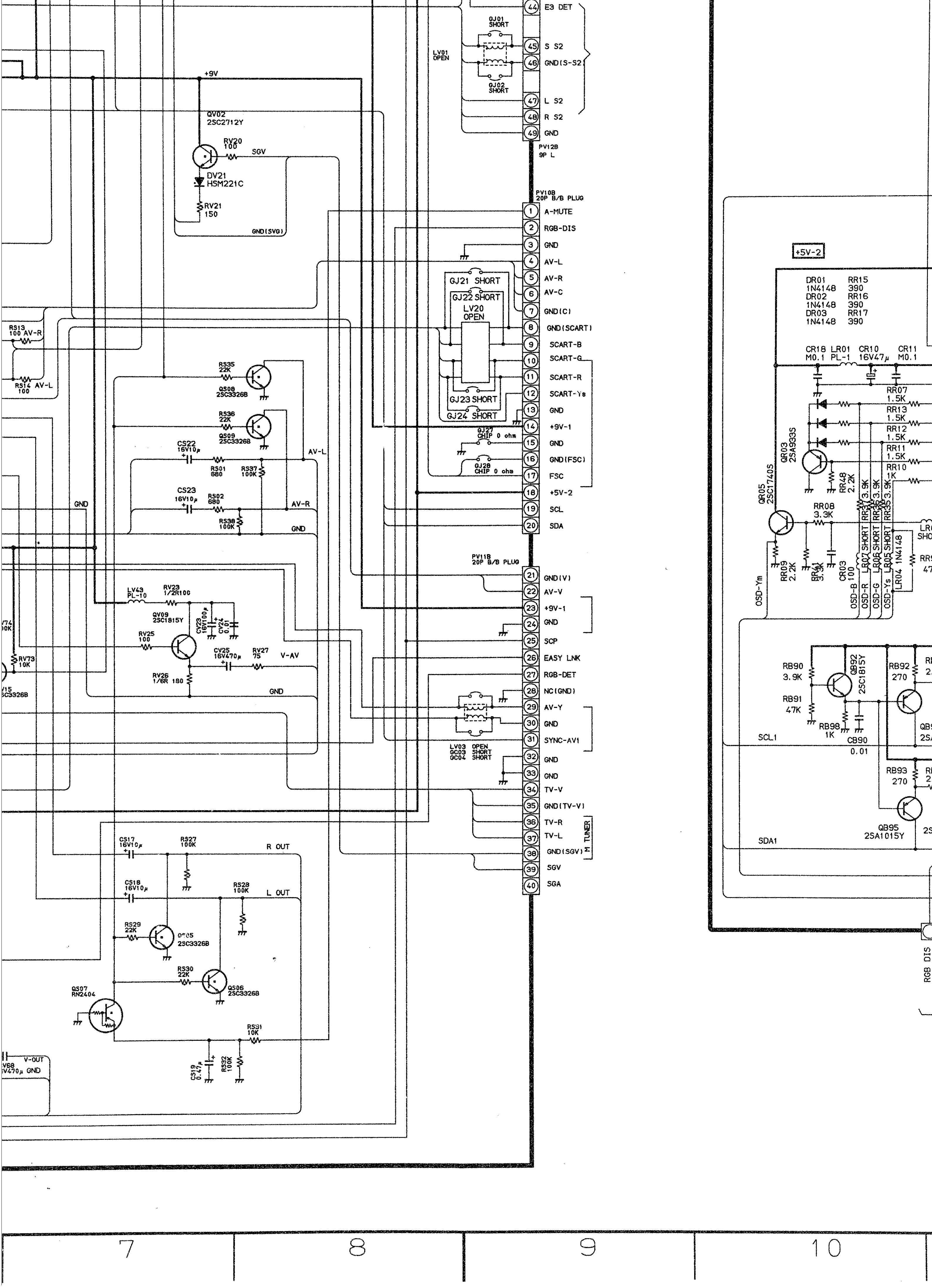
RO BOARD


+5V-1
5Vp-p SCL
5Vp-p SDA
RA71 10K
RA72 10K
DA46 1N4148
DA44 1N4148
DA45 1N4148
DA43 1N4148
CA69 0.01
CA68 16V10μ
QA02 MN24C16EN
VDD
WP
SCL
SDA
A0
A1
A2
GND
QA01 CXP750096-101S
RA105 10K
RA104 6.8K
RA101 1K
RA64 OPEN
RA102 47K
R385 1K
RA61 1K
RA107 4.7K
RA59 1K
RA108 4.7K
RA96 10K
RA57 100
RMT OUT
RA07 1K
MUTE
RA08 1K
RR05 1K
RR06 22K
XA02 OPEN
LA01 PL-10
CA420 16V10μ
CA430 0.01
DA420 1N4148
LB01 TRF1177D
CA440 0.01
CA43 100
CA42 100
CA41 100
SW0
MODE
NC
16:9ABL SW
CONVER MUTE
RGB DIS
SCL0
RMT OUT
SDA0
MUTE
OSD RST
TEX
TX
GND
VDD
EXLC
XLC
YM/SCLK
YS/DATA
I/CS
TEXT RESET
I2C STP
WOOFER SW
CONVER
SW1
RMT
SCL1
SDA1
SCART MUTE
LED
POWER1
POWER2
RGB DET
E3 DET
RST
VSS
XTAL
BUSY
AFT1 IN
KEY A
KEY B
SGV
SYNC VCD
RA97 4.7K
RA01 1K
RA02 1K
RA03 1K
RA04 1K
RA05 OPEN
RA06 1K
RA55 100
RA53 100
RA09 1K
RA10 1K
RA11 1K
RA12 1K
RA13 1K
RA14 1K
RA93 10K
RA94 10K
TEXT RES
I2C STOP
WOOFER
CONVER
SCL1
SDA1
SCART MU
CA15 0.01
XA01 TCR1080AM
CA19 100
RA19 330
RA21 1K
RA22 1K
CA24 100
RA24 15K
QR01 MB90096P-G-186-SH
AV3V
AVCC
CS
SIM DATA
SCLK
TRE BUSY
VCC
V3V
BOUT
ROUT
CPOUT
AVSS1
VCOIN
AVSS2
RESET
TEST
VSS
DOCK1
DOCK0
FH
CR19 M0.1
RR22 10K
LR02 PL-1
CR20 M0.1
RR31 330
RR32 330
RR33 330
RR34 1K
CR09 M0.1
RR23 10K
RR01 1K
RR02 100K
RR03 2.2K
CR01 1μ
RR04 100
CR02 0.01
RR15 390
RR16 390
RR17 390
LR01 PL-1
CR10 16V47μ
CR11 M0.1
RR07 1.5K
RR13 1.5K
RR12 1.5K

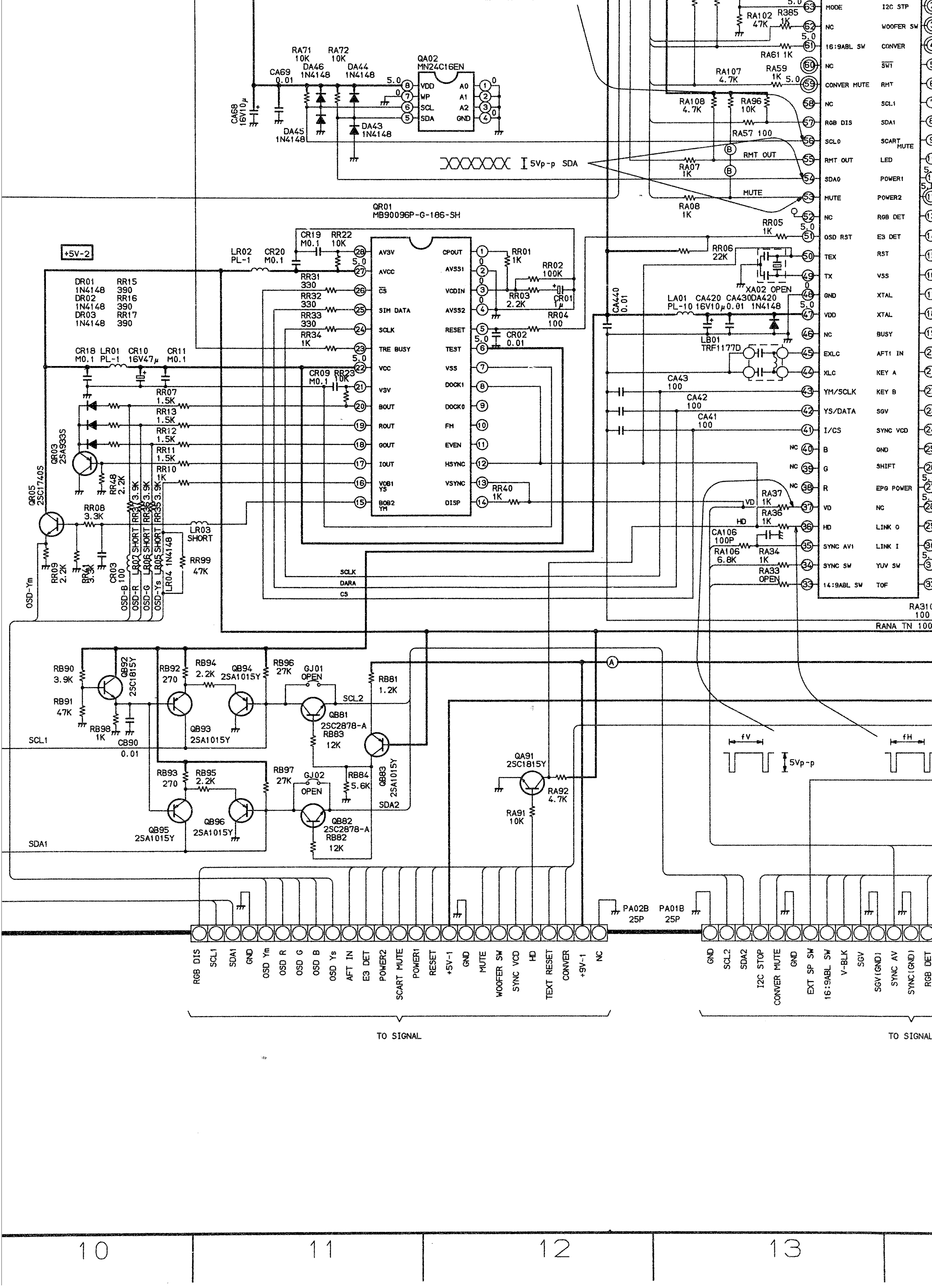

D465
MTZJ12A
-27V
R464
27K
R460
1/2R3.3K
S.Q
815Y
R461 3.3K
R491
D463
1SS133
9.1K
R463 2R1.0
R466
1.5K
-13.8
C465
50V3300P
-13.3
Q462
C1740S.Q
2SC1815Y
-0.6
D467
BYD33J
C464
100V10μ
2464067E
-20.6
-0.6
R454
22K
Q460
2SB668-O
or 2SA1788E
0
R455
33KG
C466
0.39
18
19
20
QA01
CXP750096-101S
SW0
MODE
NC
16:9ABL SW
NC
CONVER MUTE
NC
RGB DIS
SCL0
RMT OUT
SDA0
MUTE
NC
OSD RST
TEX
TX
GND
VDD
NC
EXLC
XLC
YM/SCLK
YS/DATA
I/CS
TEXT RESET
I2C STP
WOOFER SW
CONVER
SW1
RMT
SCL1
SDA1
SCART MUTE
LED
POWER1
POWER2
RGB DET
E3 DET
RST
VSS
XTAL
XTAL
BUSY
AFT1 IN
KEY A
KEY B
SGV
SYNC VCD
RA97
4.7K
RA01 1K
TEXT RESET
RA02 1K
I2C STOP
RA03 1K
WOOFER SW
RA04 1K
CONVER
RA05 OPEN
RA06 1K
RA55 100
SCL1
RA53 100
SDA1
RA09 1K
SCART MUTE
RA10 1K
RA11 1K
5.0
RA93 10K
POWER1
RA12 1K
5.0
RA94 10K
POWER2
RA13 1K
RA14 1K
CA15 0.01
RA15 10K
XA01
TCR1080AM
GND
CA107
M0.1
CA19 100
RA19 330
RA20 1K
RA21 1K
RA22 1K
RB44 10K
RB45 100
CA24 100
RA24 15K
RB43 8.2K
5Vp-p
QA03
2SA1015Y
DA01
1N4148
RA150
10K
RA120 4.7K
RA140 15K
CA14 0.01
QB03
RN1205
RB03 100
CA108 M0.01
CA109 M0.01
RGB DET
RESET
RA70 33K
RA75 33K
AFT IN
SYNC VCD
PA03A
10P
+5V-1
RMT-OUT
RMT IN
GND
KEY A
KEY B
GND
GND
LED
+5V-1
TO SIGNAL
C
D
E
F
G
H


G
H
I
J
K
L
1
2
3
4
E3
E2
E1
PH03
21 PIN S-VHS
PH02
21 PIN S-VHS
PH01
21 PIN FULL
GND
R S2
C676
1000
R691
680
R681
22K
GV05
TEM2125M
SC
QV14
2SC1815Y
CV66
16V100μ
RV61
1/2R100
RV62
100
RV63
1/2R150
CV67
16V470μ
RV64
75
RV12
680
RV13
680
CV19
1000
LV07
TEM2125M
LV06
TEM2125M
CV16
1000
CV17
1000
CV18
1000
GJ19
OPEN
V OUT
CV37
1000
LV37
OPEN
RV32
75
C
SCART2 #8
L676
TEM2125M
L OUT
C673
1000
L677
TEM2125M
R OUT
C674
1000
GV07
0 ohm
LV42
PL-10
CV77 OPEN
RV77 OPEN
RV75 OPEN
CV39 16V100μ
CV40 0.01
CV45 OPEN
RV60 1K
DV09 OPEN
RV42 OPEN
LV41 OPEN
RV45 OPEN
CV44 OPEN
RV48 OPEN
CV42 OPEN
RV69 OPEN
RV76 OPEN
QV03 OPEN
LV40 OPEN
CV43 OPEN
RV46 OPEN
QV05 OPEN
CV41 1K
QV06
2SA1162Y
TV-V
RV41 OPEN
RV43 OPEN
RV44 OPEN
QV04 OPEN
RV47 OPEN
RV49 OPEN
RV82
100
R S1
R692
680
C678
1000
R679
22K
S S1
RV30
75
L S1
R693
680
C679
1000
R678
22K
GC01
SHORT
LV05
OPEN
GC02
SHORT
TV-V/GND
GJ18
OPEN
DV14
RD9.1MB2
SCART1 #8
V V1
R V1
RV90
680
CV14
1000
R677
22K
L V1
RV91
680
CV15
1000
R676
22K
RV81
75
Ys
GV38
SHORT
RV85
75
RV89
75
GV39
SHORT
RV86
75
SCART1
GV40
SHORT
RV87
75
L682
TEM2125M
C681
1000
L683
TEM2125M
C682
1000
L684
PL-1
L685
PL-1
GV08
0 ohm
RGB GND
GJ29
OPEN
RR20
10K
DR02
HSM221C
DR03
RD4.7MB2
QR24
2SC2712Y
RR24
SHORT
RR25
1K
QR21
2SC2712Y
RR28
47K
RR29
47K
R273
47K
Q272
RN2404
R274
1K
Q270
RN1404
C273
2.2μ
Q271
RN1404

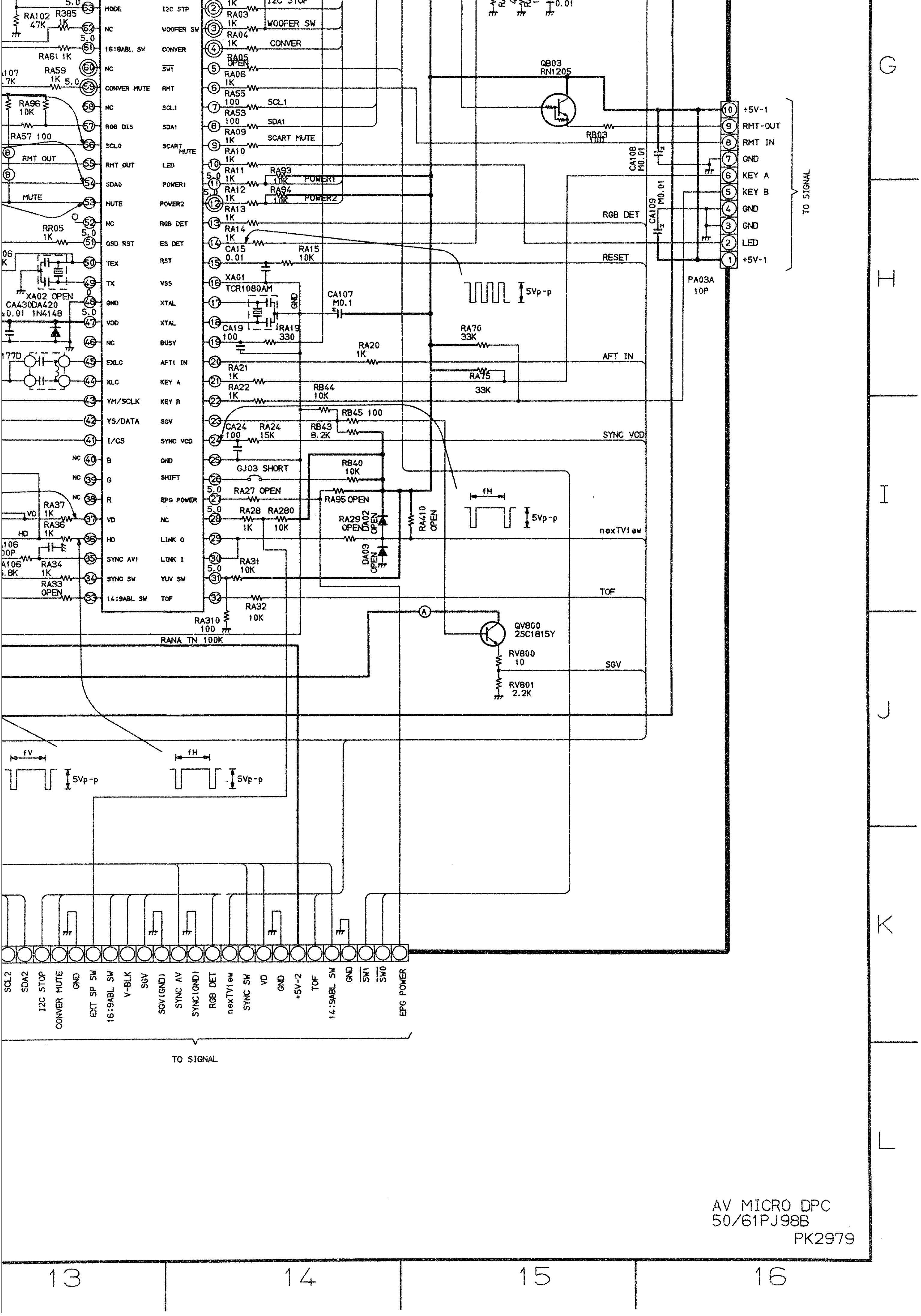

QV01
TA1218N
I/O 3
I/O 2
I/O 1
C S2
R S2
S S2
L S2
C S1
R S1
S S1
L S1
V V1
R V1
L V1
V TV
R TV
L TV
DET SLCT
DET IN
R OUT2
L OUT2
O 4
GND
SCL
SDA
SYNC OUT
ADRS
V V2
L V2
Y IN
R V2
C IN
VCC
C OUT1
R OUT1
Y OUT1
L OUT1
V OUT1
R OUT TV
L OUT TV
O 5
V OUT2
E3
E2
E1
TV
SCART2 #8
SCART1 #8
DV11 HSM221C
DV10 HSM221C
RV29 27K
RV28 68K
RV33 12K
RV34 12K
RV08 1.6K
RV07 1.6K
CV35 0.01
+9V
RV36 100
CV08 16V1000μ
LV09 PL-10
RV09 100
RV10 100
RV35 10K
GV11 0 ohm
RV18 12K
CV11 330
SCL
SDA
SYNC-AV
SGA
CV10 NP16V10μ
Y-COMB
GV13 680
GND-Y
GV14 0 ohm
CV13 0.01
C COMB
CV12 0.1
AV-C
GV15 0 ohm
RS13 100
AV-R
RS14 100
AV-L
GV17 0 ohm
AV-V
GND(V)
RS43 680
RS44 680
GJ26 0 ohm
RV19 100
DS04 OPEN
DS03 OPEN
GJ11 OPEN
DS02 OPEN
DS01 OPEN
CV01 M0.01
TV-V
TV-R
TV-L
CS02 NP2.2μ
CS01 NP2.2μ
RV01 100
RS04 100
RS03 100
CV02 16V10μNP
CS03 2.2μ
RS06 4.7K
CS04 2.2μ
RS05 4.7K
RV02 100
CV03 16V10μ
CS05 2.2μ
RS07 4.7K
RV03 100
CV04 16V10μ
RS08 4.7K
CS06 2.2μ
RV04 100
CV05 0.01
CS07 2.2μ
RS09 4.7K
CV06 16V10μ
RV05 100
CS08 2.2μ
RS10 4.7K
RV06 100
DV01 RD9.1MB2
DV02 RD9.1MB2
DV03 RD9.1MB2
DV04 RD9.1MB2
DV05 RD9.1MB2
DV06 RD9.1MB2
DV07 RD9.1MB2
DV12 RD9.1MB2
RV61 1/2R100
RV64 75
LV42 PL-10
CV39 16V100μ
CV40 0.01
CV45 OPEN
RV60 1K
QV10 2SC2712Y
RV70 100
RV71 4.7K
RV42 OPEN
LV41 OPEN
RV45 OPEN
CV44 OPEN
RV48 OPEN
RV46 OPEN
GV41 1K
QV03 OPEN
LV40 OPEN
CV43 OPEN
QV05 OPEN
QV04 OPEN
RV44 OPEN
RV43 OPEN
RV47 OPEN
RV49 OPEN
QV06 2SA1162Y
RV62 100
GC01 SHORT
LV05 OPEN
GC02 SHORT
TV-V/GND
RV94 10K
RV93 100K
QV07 2SC3326B
RV92 10
CV20 43
LV08 PL-33
GV97 100
QV11 2SC2712Y
RV97 100
QV08 2SC2712Y
RV16 270
RV95 4.7K
RV80 270
LV10 22
RV79 1K
XV01 TCF1066
RV78 10
LV11 PL-33
CV78 33
RV74 100K
RV73 10K
QV15 2SC3326B
LV43 PL-10
RV23 1/2R100
QV09 2SC1815Y
RV25 100
RV26 1/6R 180
R273 47K
Q272 RN2404
R274 1K
Q270 RN1404
Q271 RN1404
C273 2.2μ
R275 100
R276 68K
Q273 2SC2712Y
R277 10K
RR20 10K
DR02 HSM221C
QR24 2SC2712Y
RR24 SHORT
RR25 1K
QR21 2SC2712Y
RR28 47K
RR29 47K
RV65 1/2R100
CV65 16V100μ
QV12 2SC1815Y
RV66 100
RV67 1/2R150
RV68 75
CV68 16V470μ
V-OUT
GND
CS17 16V10μ
CS18 16V10μ
RS29 22K
QS07 RN2404
4
5
6
7



44 E3 DET
GJ01 SHORT
LV01 OPEN
45 S S2
46 GND(S-S2)
GJ02 SHORT
47 L S2
48 R S2
49 GND
PV12B 9P L
+9V
QV02 2SC2712Y
RV20 100
SGV
DV21 HSM221C
RV21 150
GND(SVG)
PV10B 20P B/B PLUG
1 A-MUTE
2 RGB-DIS
3 GND
4 AV-L
5 AV-R
6 AV-C
7 GND(C)
8 GND(SCART)
9 SCART-B
10 SCART-G
11 SCART-R
12 SCART-Ys
13 GND
14 +9V-1
15 GND
16 GND(FSC)
17 FSC
18 +5V-2
19 SCL
20 SDA
GJ21 SHORT
GJ22 SHORT
LV20 OPEN
GJ23 SHORT
GJ24 SHORT
GJ27 CHIP 0 ohm
GJ28 CHIP 0 ohm
RS13 100 AV-R
RS14 AV-L 100
RS35 22K
QS08 2SC3326B
RS36 22K
QS09 2SC3326B
CS22 16V10μ
RS01 680
RS37 100K
AV-L
CS23 16V10μ
RS02 680
RS38 100K
AV-R
GND
GND
PV11B 20P B/B PLUG
21 GND(V)
22 AV-V
23 +9V-1
24 GND
25 SCP
26 EASY LNK
27 RGB-DET
28 NC(GND)
29 AV-Y
30 GND
31 SYNC-AV1
32 GND
33 GND
34 TV-V
35 GND(TV-V)
36 TV-R
37 TV-L
38 GND(SGV)
39 SGV
40 SGA
M TUNER
LV03 OPEN
GC03 SHORT
GC04 SHORT
LV43 PL-10
RV23 1/2R100
QV09 2SC1815Y
CV23 16V100μ
CV24 0.01
RV25 100
CV25 16V470μ
RV27 75
V-AV
RV26 1/6R 180
GND
V74 0K
RV73 10K
V15 SC3326B
CS17 16V10μ
RS27 100K
R OUT
CS18 16V10μ
RS28 100K
L OUT
RS29 22K
QS05 2SC3326B
RS30 22K
QS06 2SC3326B
QS07 RN2404
RS31 10K
CS19 0.47μ
RS32 100K
V-OUT
V68 6V470μ GND
+5V-2
DR01 1N4148
DR02 1N4148
DR03 1N4148
RR15 390
RR16 390
RR17 390
CR18 M0.1
LR01 PL-1
CR10 16V47μ
CR11 M0.1
RR07 1.5K
RR13 1.5K
RR12 1.5K
RR11 1.5K
RR10 1K
QR03 2SA933S
RR48 2.2K
QR05 2SC1740S
RR08 3.3K
RR37 3.9K
RR36 3.9K
RR35 3.9K
LR07 SHORT
LR06 SHORT
LR05 SHORT
LR04 1N4148
RR09 2.2K
RR41 3.3K
CR03 100
OSD-Ym
OSD-B
OSD-R
OSD-G
OSD-Ys
RB90 3.9K
RB91 47K
QB92 2SC1815Y
RB98 1K
CB90 0.01
RB92 270
RB93 270
QB95 2SA1015Y
SCL1
SDA1
RGB DIS
7
8
9
10



QA02
MN24C16EN
VDD
WP
SCL
SDA
A0
A1
A2
GND
RA71 10K
RA72 10K
DA46 1N4148
DA44 1N4148
DA45 1N4148
DA43 1N4148
CA69 0.01
CA68 16V10μ
5Vp-p SDA
QR01
MB90096P-G-186-SH
AV3V
AVCC
CS
SIM DATA
SCLK
TRE BUSY
VCC
V3V
BOUT
ROUT
GOUT
IOUT
VOB1 YS
BOB2 YM
CPOUT
AVSS1
VCDIN
AVSS2
RESET
TEST
VSS
DOCK1
DOCK0
FH
EVEN
HSYNC
VSYNC
DISP
+5V-2
LR02 PL-1
CR20 M0.1
CR19 M0.1
RR22 10K
RR31 330
RR32 330
RR33 330
RR34 1K
RR01 1K
RR02 100K
RR03 2.2K
CR01 1μ
RR04 100
CR02 0.01
CR09 M0.1
RR23 10K
RR40 1K
DR01 1N4148
DR02 1N4148
DR03 1N4148
RR15 390
RR16 390
RR17 390
CR18 M0.1
LR01 PL-1
CR10 16V47μ
CR11 M0.1
RR07 1.5K
RR13 1.5K
RR12 1.5K
RR11 1.5K
RR10 1K
QR03 2SA933S
RR48 2.2K
QR05 2SC1740S
RR08 3.3K
RR09 2.2K
RR41 3.3K
CR03 100
LR03 SHORT
LR07 SHORT
LR06 SHORT
LR05 SHORT
LR04 1N4148
RR37 3.9K
RR36 3.9K
RR35 3.9K
RR99 47K
OSD-Ym
OSD-B
OSD-R
OSD-G
OSD-Ys
SCLK
DARA
CS
RB90 3.9K
RB91 47K
QB92 2SC1815Y
RB98 1K
CB90 0.01
RB92 270
RB94 2.2K
QB94 2SA1015Y
QB93 2SA1015Y
RB96 27K
GJ01 OPEN
QB81 2SC2878-A
RB83 12K
RB81 1.2K
QB83 2SA1015Y
SCL2
SCL1
RB93 270
RB95 2.2K
QB95 2SA1015Y
QB96 2SA1015Y
RB97 27K
GJ02 OPEN
RB84 5.6K
QB82 2SC2878-A
RB82 12K
SDA2
SDA1
QA91 2SC1815Y
RA92 4.7K
RA91 10K
PA02B 25P
PA01B 25P
RGB DIS
SCL1
SDA1
GND
OSD Ym
OSD R
OSD G
OSD B
OSD Ys
AFT IN
E3 DET
POWER2
SCART MUTE
POWER1
RESET
+5V-1
GND
MUTE
WOOFER SW
SYNC VCD
HD
TEXT RESET
CONVER
+9V-1
NC
TO SIGNAL
GND
SCL2
SDA2
I2C STOP
CONVER MUTE
GND
EXT SP SW
16:9ABL SW
V-BLK
SGV
SGV(GND)
SYNC AV
SYNC(GND)
RGB DET
TO SIGNAL
RA102 47K
R385 1K
RA61 1K
RA107 4.7K
RA59 1K
RA108 4.7K
RA96 10K
RA57 100
RA07 1K
RA08 1K
RMT OUT
MUTE
RR05 1K
RR06 22K
XA02 OPEN
LA01 PL-10
CA420 16V10μ
CA430 0.01
DA420 1N4148
CA440 0.01
LB01 TRF1177D
CA43 100
CA42 100
CA41 100
RA37 1K
RA36 1K
CA106 100P
RA106 6.8K
RA34 1K
RA33 OPEN
VD
HD
RA310 100
RANA TN 100
MODE
NC
16:9ABL SW
NC
CONVER MUTE
NC
RGB DIS
SCL0
RMT OUT
SDA0
MUTE
NC
OSD RST
TEX
TX
GND
VDD
NC
EXLC
XLC
YM/SCLK
YS/DATA
I/CS
B
G
R
VD
HD
SYNC AV1
SYNC SW
14:9ABL SW
I2C STP
WOOFER SW
CONVER
SW1
RMT
SCL1
SDA1
SCART MUTE
LED
POWER1
POWER2
RGB DET
E3 DET
RST
VSS
XTAL
XTAL
BUSY
AFT1 IN
KEY A
KEY B
SGV
SYNC VCD
GND
SHIFT
EPG POWER
NC
LINK O
LINK I
YUV SW
TOF
fV
fH
5Vp-p
10
11
12
13


MODE
I2C STP
NC
WOOFER SW
16:9ABL SW
CONVER
SW1
CONVER MUTE
RMT
SCL1
RGB DIS
SDA1
SCL0
SCART MUTE
RMT OUT
LED
SDA0
POWER1
MUTE
POWER2
RGB DET
OSD RST
E3 DET
TEX
RST
TX
VSS
GND
XTAL
VDD
BUSY
EXLC
AFT1 IN
XLC
KEY A
YM/SCLK
KEY B
YS/DATA
SGV
I/CS
SYNC VCD
B
G
SHIFT
R
EPG POWER
VD
HD
LINK 0
SYNC AV1
LINK I
SYNC SW
YUV SW
14:9ABL SW
TOF
RA102 47K
R385 1K
RA61 1K
RA59 1K
RA96 10K
RA57 100
RR05 1K
XA02 OPEN
CA430
DA420 1N4148
RA37 1K
RA36 1K
RA34 1K
RA33 OPEN
RA03 1K
RA04 1K
RA05 OPEN
RA06 1K
RA55 100
RA53 100
RA09 1K
RA10 1K
RA11 1K
RA12 1K
RA13 1K
RA14 1K
RA93 10K
RA94 10K
POWER1
POWER2
I2C STOP
WOOFER SW
CONVER
SCL1
SDA1
SCART MUTE
CA15 0.01
RA15 10K
XA01 TCR1080AM
CA107 M0.1
CA19 100
RA19 330
RA20 1K
RA21 1K
RA22 1K
RB44 10K
RB45 100
RB43 8.2K
CA24 100
RA24 15K
GJ03 SHORT
RB40 10K
RA27 OPEN
RA95 OPEN
RA28 1K
RA280 10K
RA29 OPEN
DA02 OPEN
DA03 OPEN
RA410 OPEN
RA31 10K
RA32 10K
RA310 100
RANA TN 100K
RA70 33K
RA75 33K
QB03 RN1205
RB03 100
CA108 M0.01
CA109 M0.01
QV800 2SC1815Y
RV800 10
RV801 2.2K
PA03A 10P
+5V-1
RMT-OUT
RMT IN
GND
KEY A
KEY B
GND
GND
LED
+5V-1
TO SIGNAL
RGB DET
RESET
AFT IN
SYNC VCD
nexTView
TOF
SGV
5Vp-p
fH
fV
SCL2
SDA2
I2C STOP
CONVER MUTE
GND
EXT SP SW
16:9ABL SW
V-BLK
SGV
SGV(GND)
SYNC AV
SYNC(GND)
RGB DET
nexTView
SYNC SW
VD
GND
+5V-2
TOF
14:9ABL SW
GND
SW1
SW0
EPG POWER
TO SIGNAL
G
H
I
J
K
L
13
14
15
16

AV MICRO DPC
50/61PJ98B
PK2979

SCHEMATIC DIAGRAM MODEL : 50PJ98G (2/6)

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 3. Do not degrade the safety of the receiver through improper servicing.

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position. Set other controls for best picture.

NOTES:

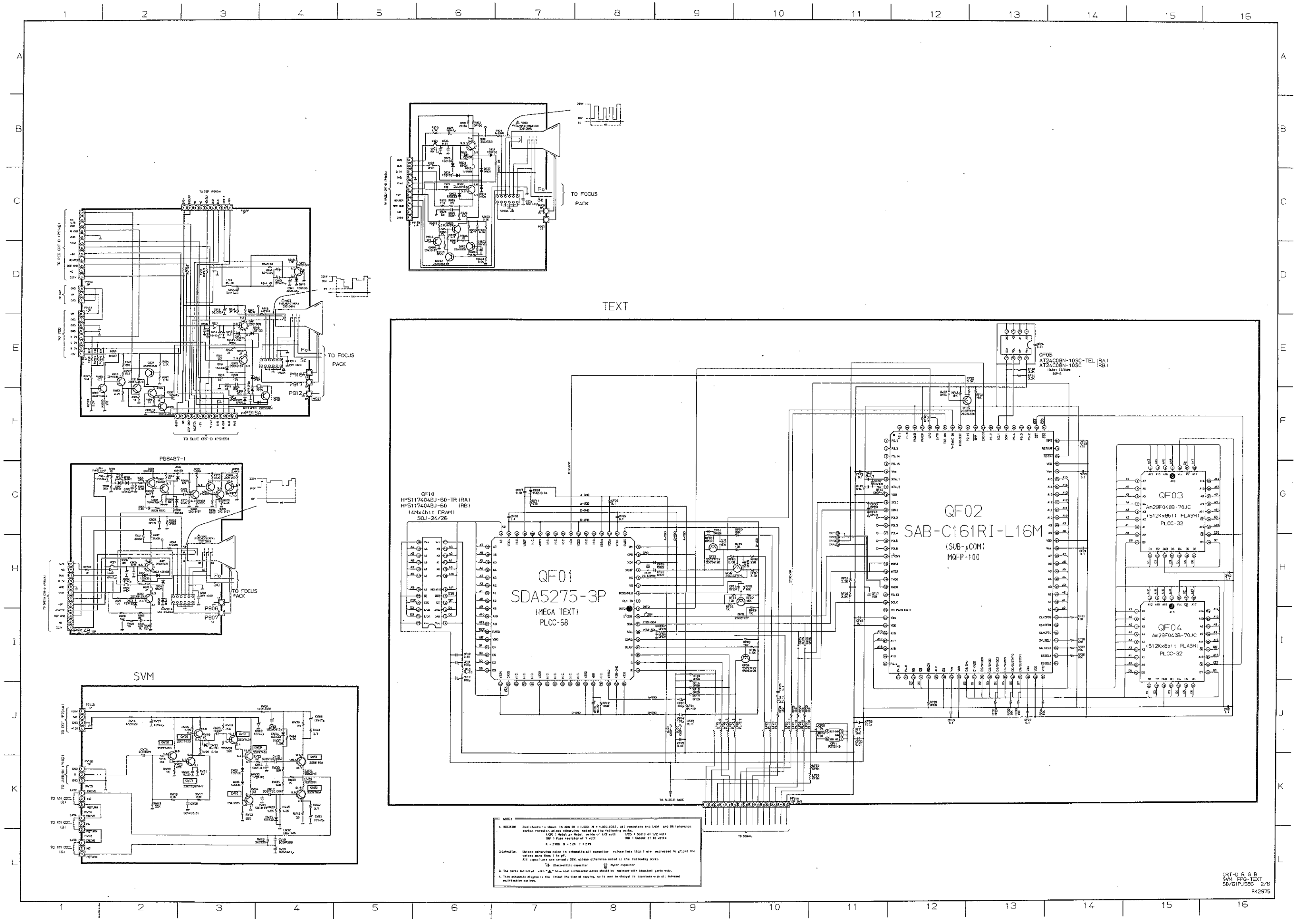
1. D.C. resistance value of a principal transformer is shown in this schematic diagram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less than 1 are expressed in µF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in µH, and the values less than 1 in H.

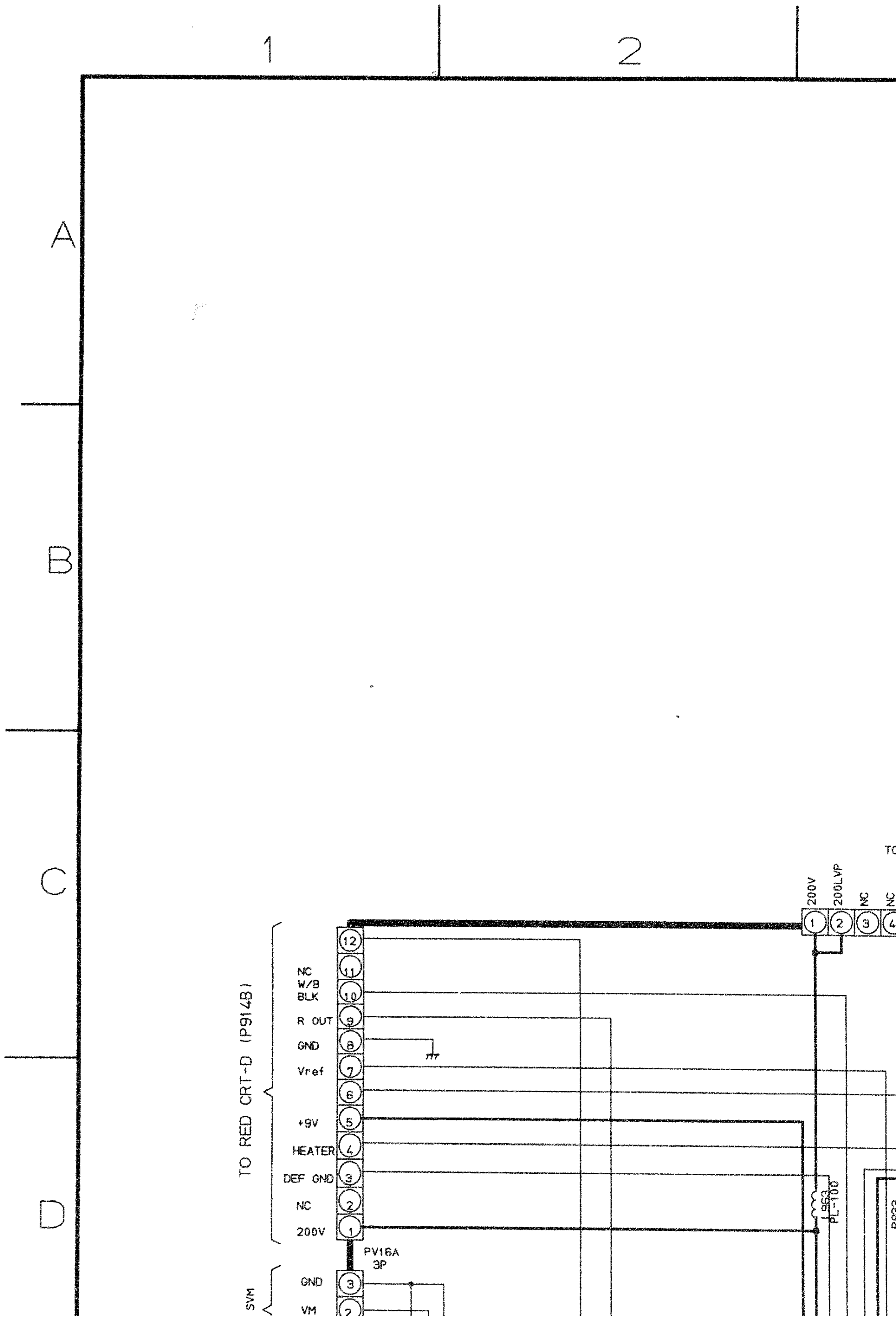
030-9915


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
A B C D E F G H I J K L
TO FOCUS PACK
P915A
TO BLUE CRT-D (P913B)
TO RED CRT-D (P914B)
TO VCD
PG6487-1
TO FOCUS PACK
P906
P907
TO FOCUS PACK
P916
P912
SVM
TEXT
QF10
HY5117404BJ-60-TR (RA)
HY5117404BJ-60 (RB)
(4Mx4bit DRAM)
SOJ-24/26
QF01
SDA5275-3P
(MEGA TEXT)
PLCC-68
QF02
SAB-C161RI-L16M
(SUB-µCOM)
MQFP-100
QF05
AT24C08N-10SC-TEL (RA)
AT24C08N-10SC (RB)
(8kbit EEPROM)
SOP-8
QF03
Am29F040B-70JC
(512Kx8bit FLASH)
PLCC-32
QF04
Am29F040B-70JC
(512Kx8bit FLASH)
PLCC-32
TO SHIELD CASE
CRT-D R G B
SVM EPG-TEXT
50/61PJ98G 2/6
PK2975

SCHEMATIC DIAGRAM MODEL : 50PJ98G (2/6)

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designat
ponents which have special characteristics important for safety and should be replaced only with types
those in the original circuit or specified in the parts list. The mounting position of replacements is to be
with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOT
3. Do not degrade the safety of the receiver through improper servicing.

030-9915

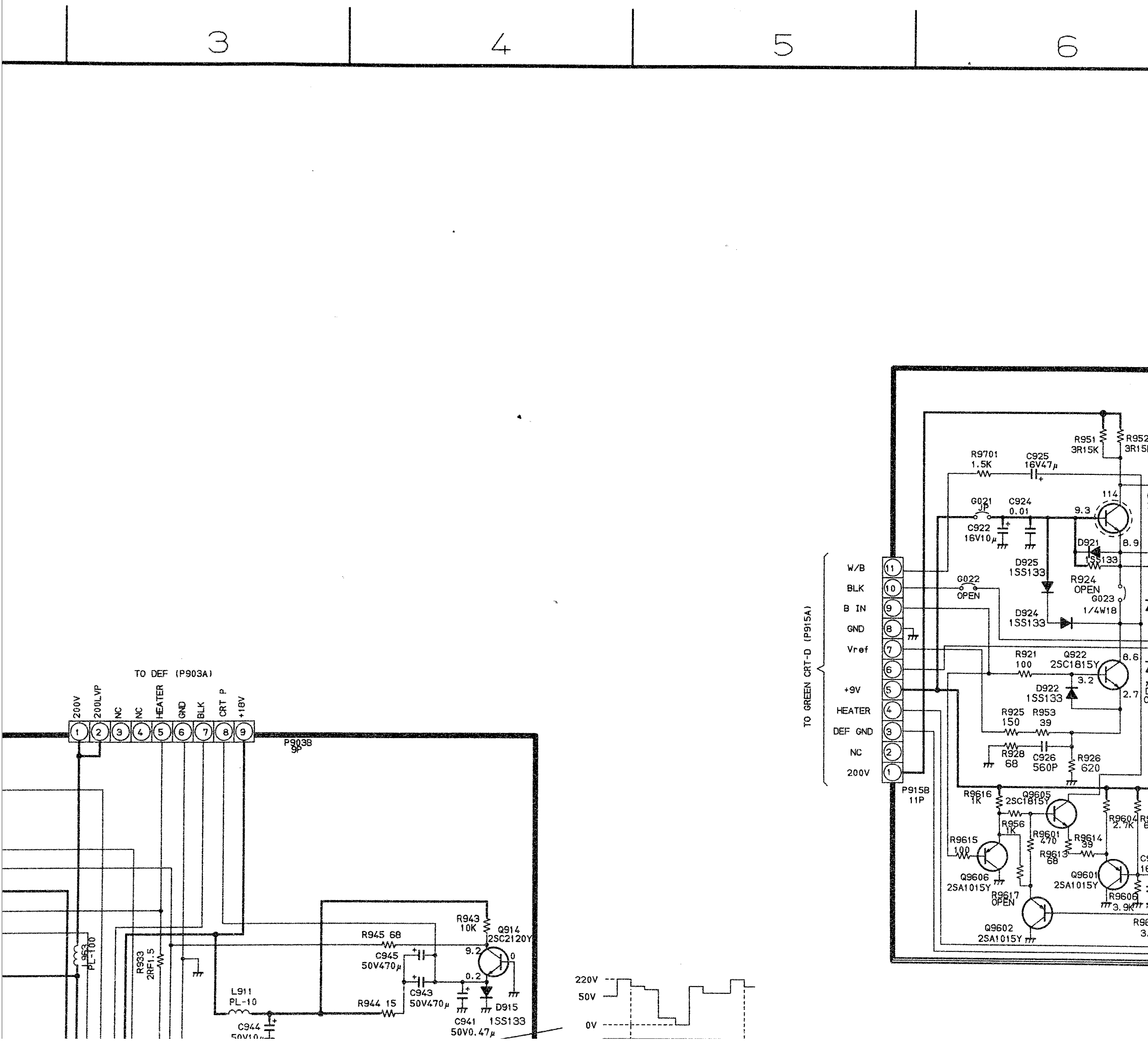

1
2
A
B
C
D
TO RED CRT-D (P914B)
NC
W/B
BLK
R OUT
GND
Vref
+9V
HEATER
DEF GND
NC
200V
12
11
10
9
8
7
6
5
4
3
2
1
PV16A
3P
SVM
GND
VM
TO
200V
200LVP
NC
NC
L963
PL-100

(2/6)

s list designate com-
nly with types identical to
nents is to be identical
SAFETY NOTICE on page

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, lin
   volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low ca
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid
   BRIGHTNESS control is almost in maximum position. Set other con
   picture.



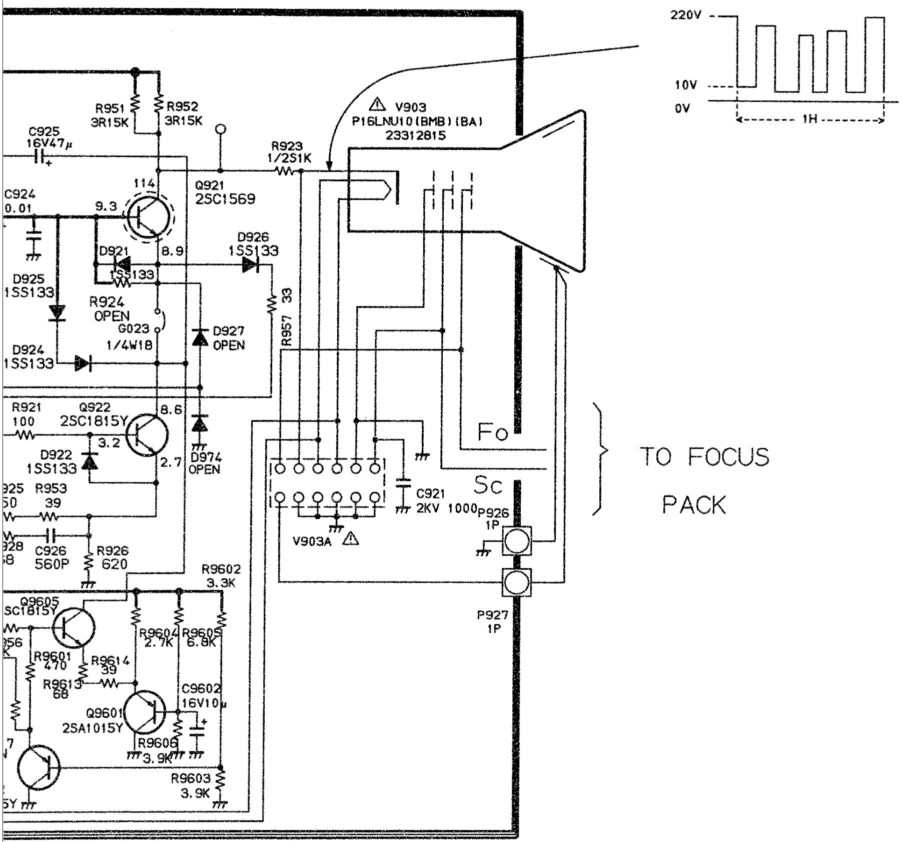
3
4
5
6
TO DEF (P903A)
200V
200LVP
NC
NC
HEATER
GND
BLK
CRT P
+18V
P903B
9P
L953
PL-100
R933
2RF1.5
L911
PL-10
C944
50V10μ
R945 68
C945
50V470μ
R944 15
C943
50V470μ
R943
10K
Q914
2SC2120Y
9.2
0.2
0
C941
50V0.47μ
D915
1SS133
220V
50V
0V
TO GREEN CRT-D (P915A)
W/B
BLK
B IN
GND
Vref
+9V
HEATER
DEF GND
NC
200V
P915B
11P
R9701
1.5K
C925
16V47μ
G021
JP
C924
0.01
C922
16V10μ
R951
3R15K
R952
3R15
114
9.3
8.9
D921
1SS133
D925
1SS133
G022
OPEN
R924
OPEN
G023
1/4W18
D924
1SS133
R921
100
Q922
2SC1815Y
3.2
8.6
2.7
D922
1SS133
R925
150
R953
39
R928
68
C926
560P
R926
620
R9616
1K
Q9605
2SC1815Y
R956
1K
R9604
2.7K
R9615
100
R9601
470
R9614
39
R9613
68
Q9606
2SA1015Y
Q9601
2SA1015Y
R9617
OPEN
R9608
3.9K
Q9602
2SA1015Y

s ground, line voltage 220
20%.
e and a low capacity probe.
ıal.
are in mid position and
Set other controls for best

NOTES:

1. D.C. resistance value of a principal transformer is shov
   gram. These are measured for separated from the circui
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.

6 7 8 9


220V
10V
0V
1H
⚠ V903
P16LNU10(BMB)(BA)
23312815
R951
3R15K
R952
3R15K
C925
16V47μ
R923
1/2S1K
C924
0.01
114
9.3
Q921
2SC1569
8.9
D921
1SS133
D926
1SS133
D925
1SS133
R924
OPEN
G023
1/4W18
D927
OPEN
R957 33
D924
1SS133
R921
100
Q922
2SC1815Y
8.6
3.2
D922
1SS133
2.7
D974
OPEN
R953
39
C926
560P
R926
620
R9602
3.3K
Q9605
2SC1815Y
R9601
470
R9614
39
R9613
68
R9604
2.7K
R9605
6.8K
Q9601
2SA1015Y
C9602
16V10μ
R9606
3.9K
R9603
3.9K
C921
2KV 1000P
V903A ⚠
P926
1P
P927
1P
Fo
Sc
TO FOCUS
PACK

ormer is shown in this schematic dia-
m the circuit.
otice.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and IND

1. Resistance is shown in ohm, k=1,000, M=1,000
2. Unless other wise noted in schematic, all capa sed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all induc sed in μH, and the values less than 1 in H.

10	11	12	13

APACITOR and INDUCTOR

n, k=1,000, M=1,000,000

n schematic, all capacitor values less than 1 are expres-
ore than 1 in pF.

schematic, all inductor values more than 1 are expres-
ess than 1 in H.

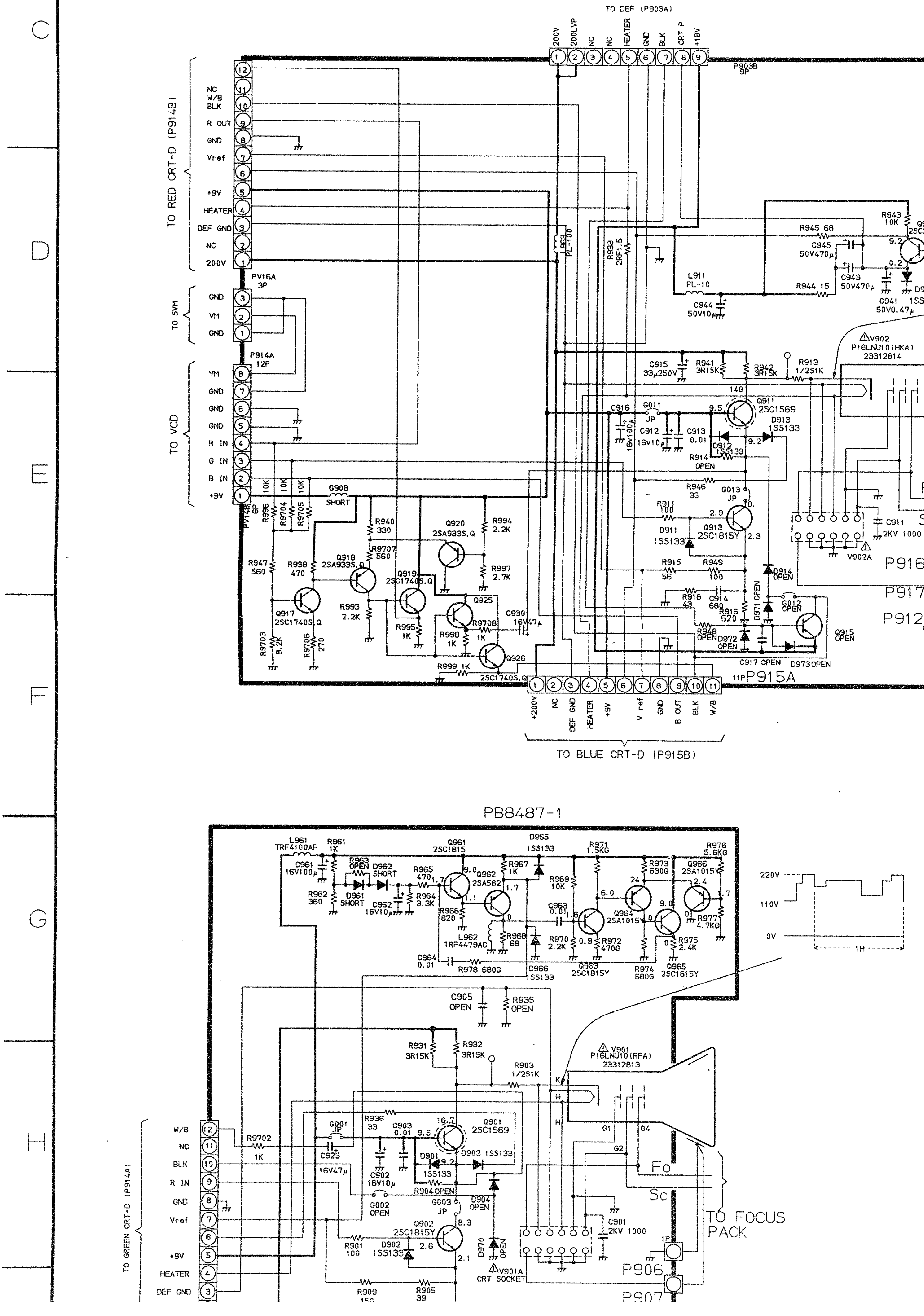
13 14 15 16

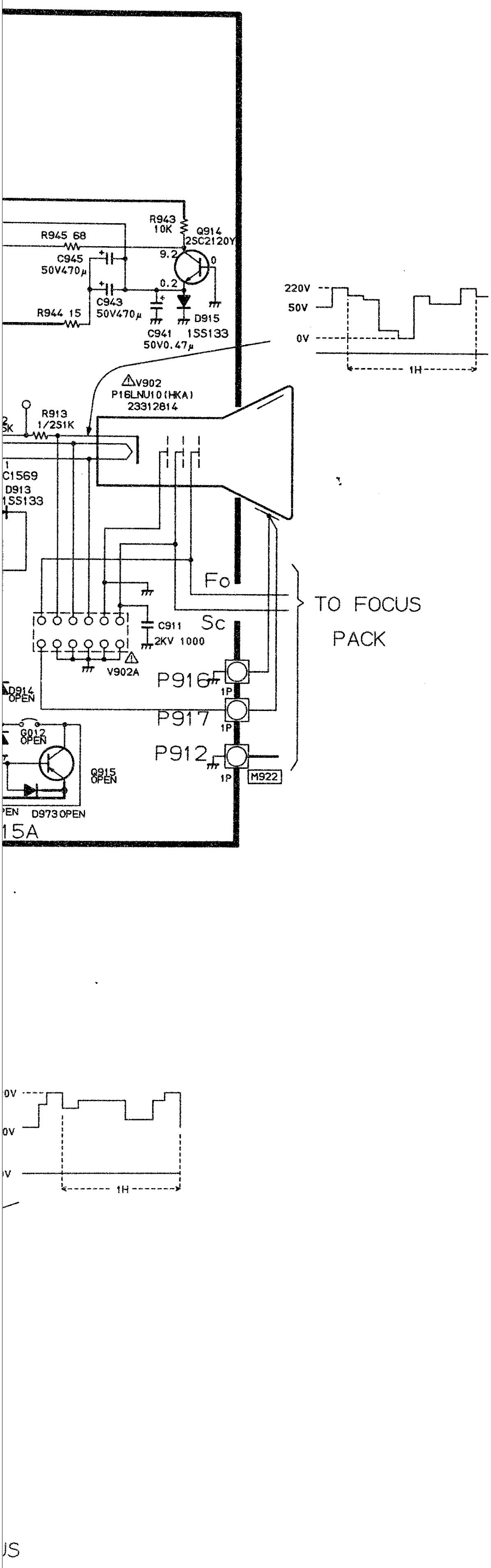
A

B

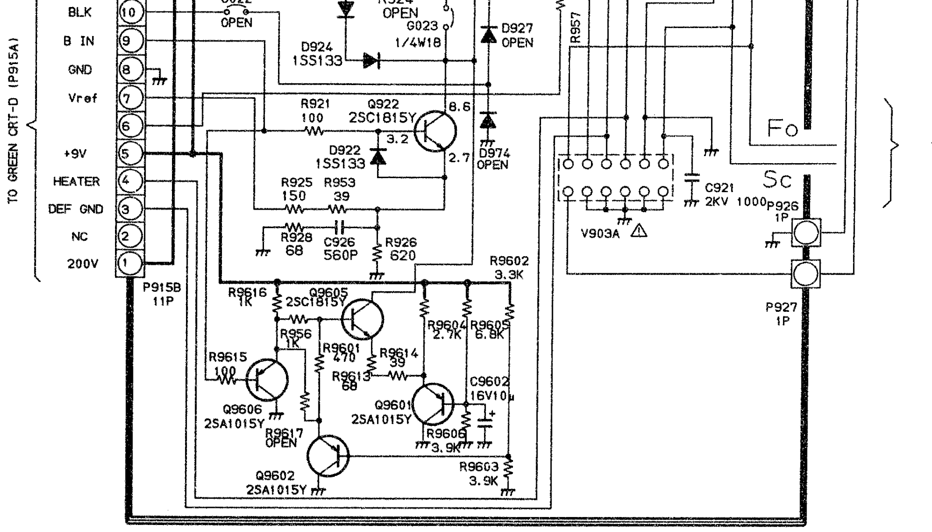
C

D

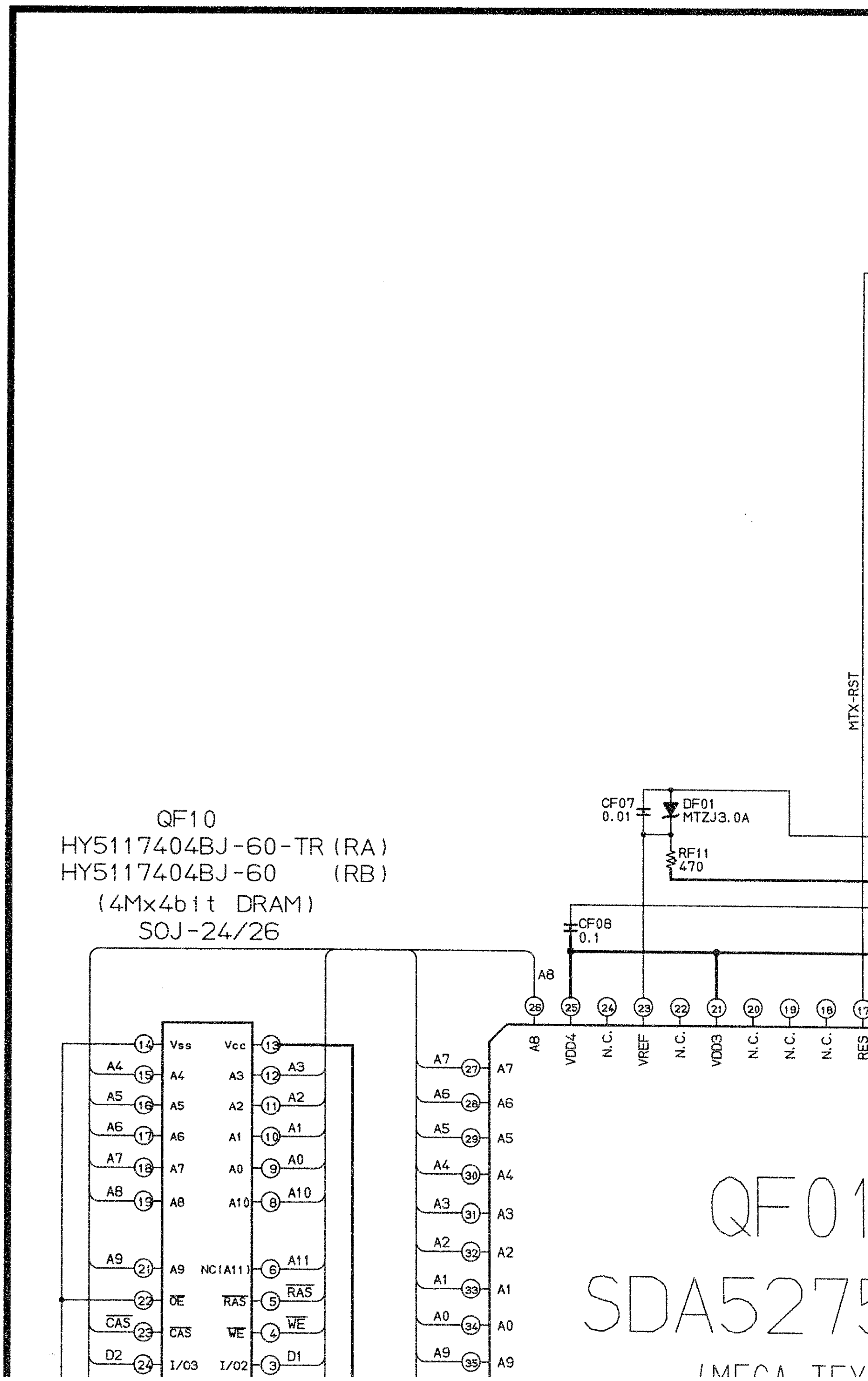

C
D
E
F
G
H
TO DEF (P903A)
200V
200LVP
NC
NC
HEATER
GND
BLK
CRT P
+16V
P903B 9P
TO RED CRT-D (P914B)
NC
W/B
BLK
R OUT
GND
Vref
+9V
HEATER
DEF GND
NC
200V
PV16A 3P
TO SVM
GND
VM
GND
P914A 12P
TO VCD
VM
GND
GND
GND
R IN
G IN
B IN
+9V
PV14B 6P
R996 10K
R9704 10K
R9705 10K
G908 SHORT
R940 330
R9707 560
Q920 2SA933S,Q
R994 2.2K
R997 2.7K
R947 560
R938 470
Q918 2SA933S,Q
Q919 2SC1740S,Q
Q925
Q917 2SC1740S,Q
R993 2.2K
R995 1K
R998 1K
R9708 1K
C930 16V47μ
R9703 8.2K
R9706 270
R999 1K
Q926 2SC1740S,Q
L963 PL-100
R933 2RF1.5
L911 PL-10
C944 50V10μ
R945 68
C945 50V470μ
R944 15
C943 50V470μ
C941 50V0.47μ
R943 10K
⚠V902 P16LNU10(HKA) 23312814
C915 33μ250V
R941 3R15K
R942 3R15K
R913 1/2S1K
148
Q911 2SC1569
C916 16V100μ
G011 JP
C912 16V10μ
C913 0.01
D912 1SS133
D913 1SS133
R914 OPEN
R946 33
G013 JP
R911 100
Q913 2SC1815Y
D911 1SS133
C911 2KV 1000
⚠V902A
P916
P917
P912
R915 56
R949 100
D914 OPEN
R918 43
C914 680
R916 620
D971 OPEN
G012 OPEN
Q915 OPEN
R948 OPEN
D972 OPEN
C917 OPEN
D973 OPEN
11P P915A
+200V
NC
DEF GND
HEATER
+9V
V ref
GND
B OUT
BLK
W/B
TO BLUE CRT-D (P915B)
PB8487-1
L961 TRF4100AF
R961 1K
C961 16V100μ
R963 OPEN
D962 SHORT
R962 360
D961 SHORT
C962 16V10μ
R965 470
R964 3.3K
Q961 2SC1815
Q962 2SA562
R966 820
L962 TRF4479AC
R967 1K
R968 68
D965 1SS133
R969 10K
C963 0.01
R970 2.2K
Q963 2SC1815Y
R971 1.5KG
R972 470G
Q964 2SA1015Y
R973 680G
R974 680G
Q965 2SC1815Y
R975 2.4K
R976 5.6KG
Q966 2SA1015Y
R977 4.7KG
C964 0.01
R978 680G
D966 1SS133
220V
110V
0V
1H
C905 OPEN
R935 OPEN
R931 3R15K
R932 3R15K
R903 1/2S1K
⚠V901 P16LNU10(RFA) 23312813
K
H
H
G1
G4
G2
Fo
Sc
TO FOCUS PACK
TO GREEN CRT-D (P914A)
W/B
NC
BLK
R IN
GND
Vref
+9V
HEATER
DEF GND
R9702 1K
G001 JP
C923 16V47μ
R936 33
C903 0.01
Q901 2SC1569
D901 1SS133
D903 1SS133
C902 16V10μ
R904 OPEN
G002 OPEN
G003 JP
D904 OPEN
Q902 2SC1815Y
R901 100
D902 1SS133
D970 OPEN
⚠V901A CRT SOCKET
C901 2KV 1000
P906
P907
R909 150
R905 39



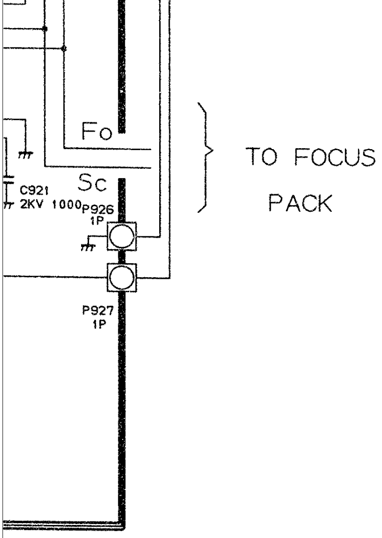
R943 10K
Q914 2SC2120Y
R945 68
C945 50V470μ
C943 50V470μ
R944 15
C941 50V0.47μ
D915 1SS133
220V
50V
0V
1H
⚠V902
P16LNU10(HKA)
23312814
R913 1/2S1K
C1569
D913 1SS133
Fo
Sc
TO FOCUS PACK
C911 2KV 1000
V902A
P916
P917
P912
M922
D914 OPEN
G012 OPEN
Q915 OPEN
D973 OPEN
15A
JS



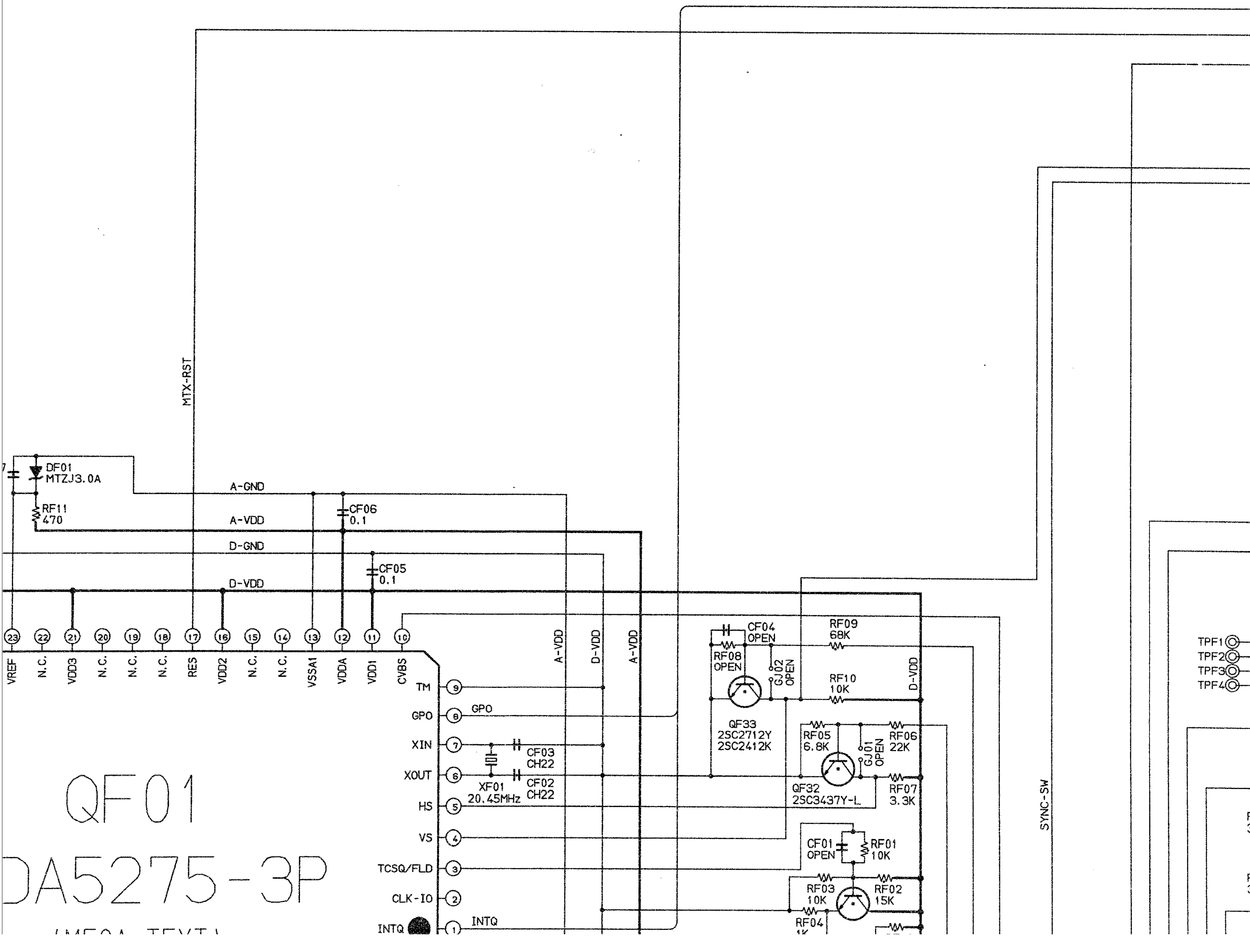
BLK
B IN
GND
Vref
+9V
HEATER
DEF GND
NC
200V
TO GREEN CRT-D (P915A)
P915B 11P
D924 1SS133
G023 1/4W18
D927 OPEN
R957
R921 100
Q922 2SC1815Y
D922 1SS133
D974 OPEN
R925 150
R953 39
R928 68
C926 560P
R926 620
R9602 3.3K
R9616 1K
Q9605 2SC1815Y
R956 1K
R9601 470
R9614 39
R9613 68
R9604 2.7K
R9605 6.8K
R9615 100
Q9606 2SA1015Y
R9617 OPEN
Q9601 2SA1015Y
C9602 16V10μ
R9606 3.9K
Q9602 2SA1015Y
R9603 3.9K
Fo
Sc
C921 2KV 1000
V903A
P926 1P
P927 1P

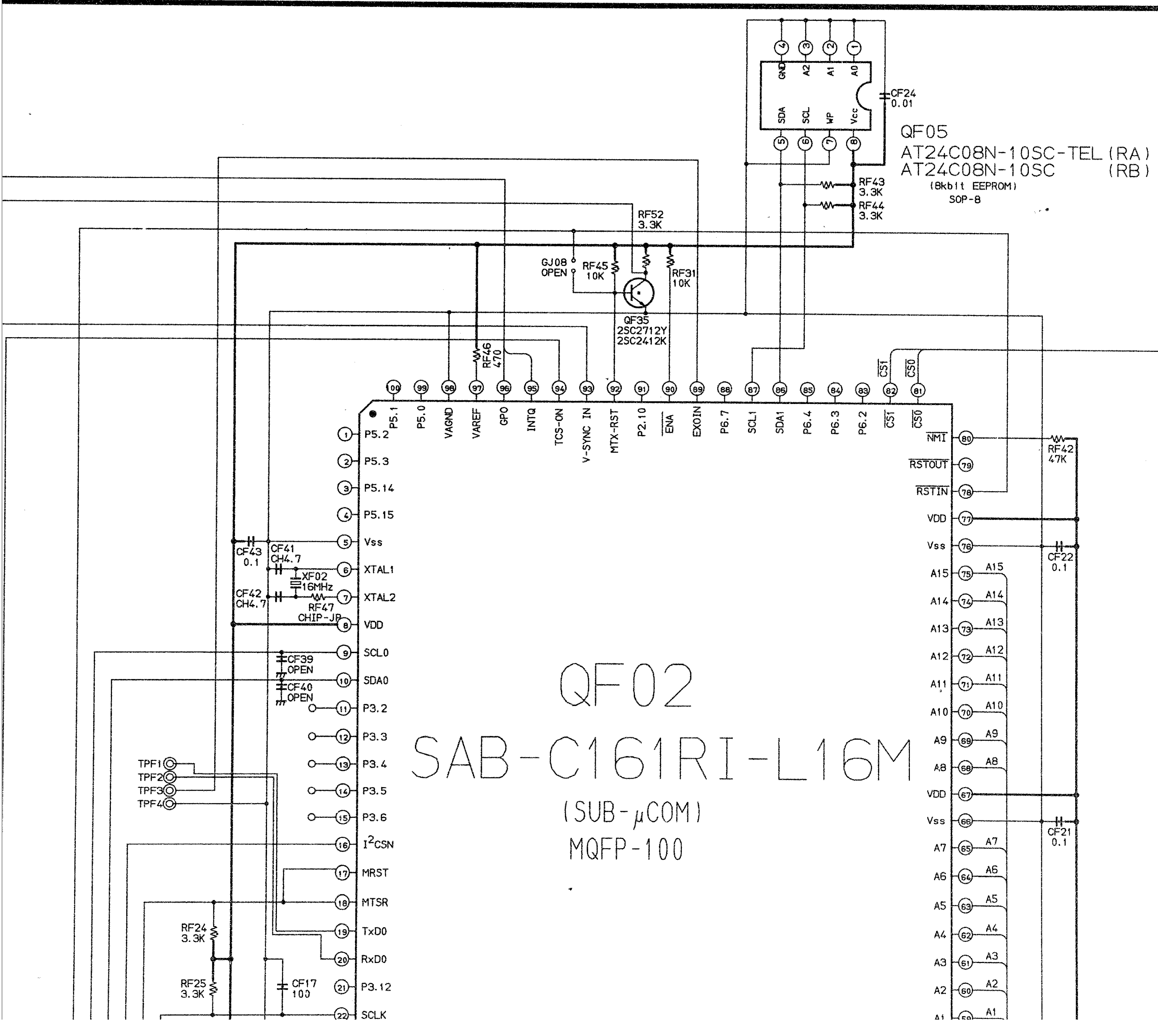


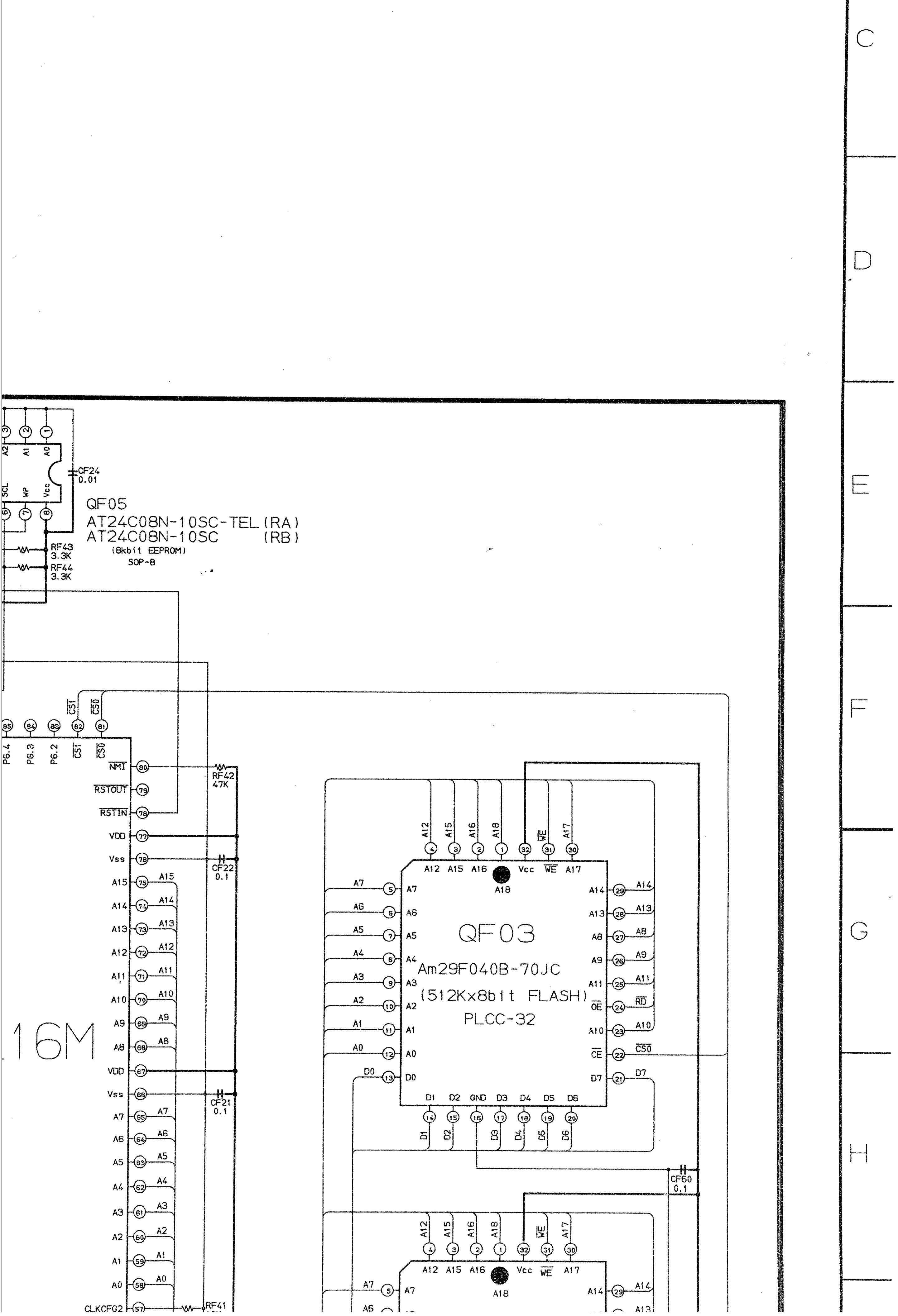
QF10
HY5117404BJ-60-TR (RA)
HY5117404BJ-60 (RB)
(4Mx4bit DRAM)
SOJ-24/26
Vss
Vcc
A4
A3
A5
A2
A6
A1
A7
A0
A8
A10
A9
NC(A11)
A11
OE
RAS
CAS
WE
D2
I/O3
I/O2
D1
CF07 0.01
DF01 MTZJ3.0A
RF11 470
CF08 0.1
MTX-RST
A8
VDD4
N.C.
VREF
VDD3
RES
QF01
SDA527

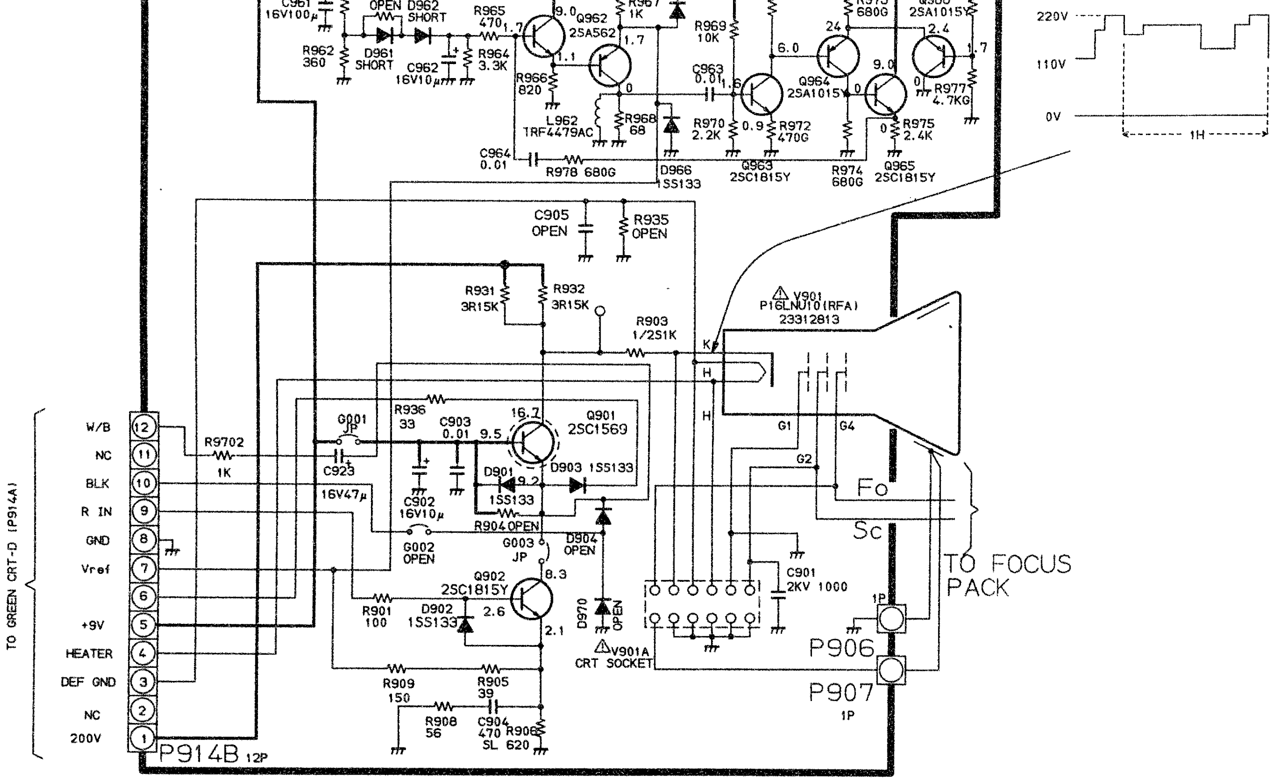

Fo
Sc
TO FOCUS
PACK
C921
2KV 1000
P926
1P
P927
1P

TEXT

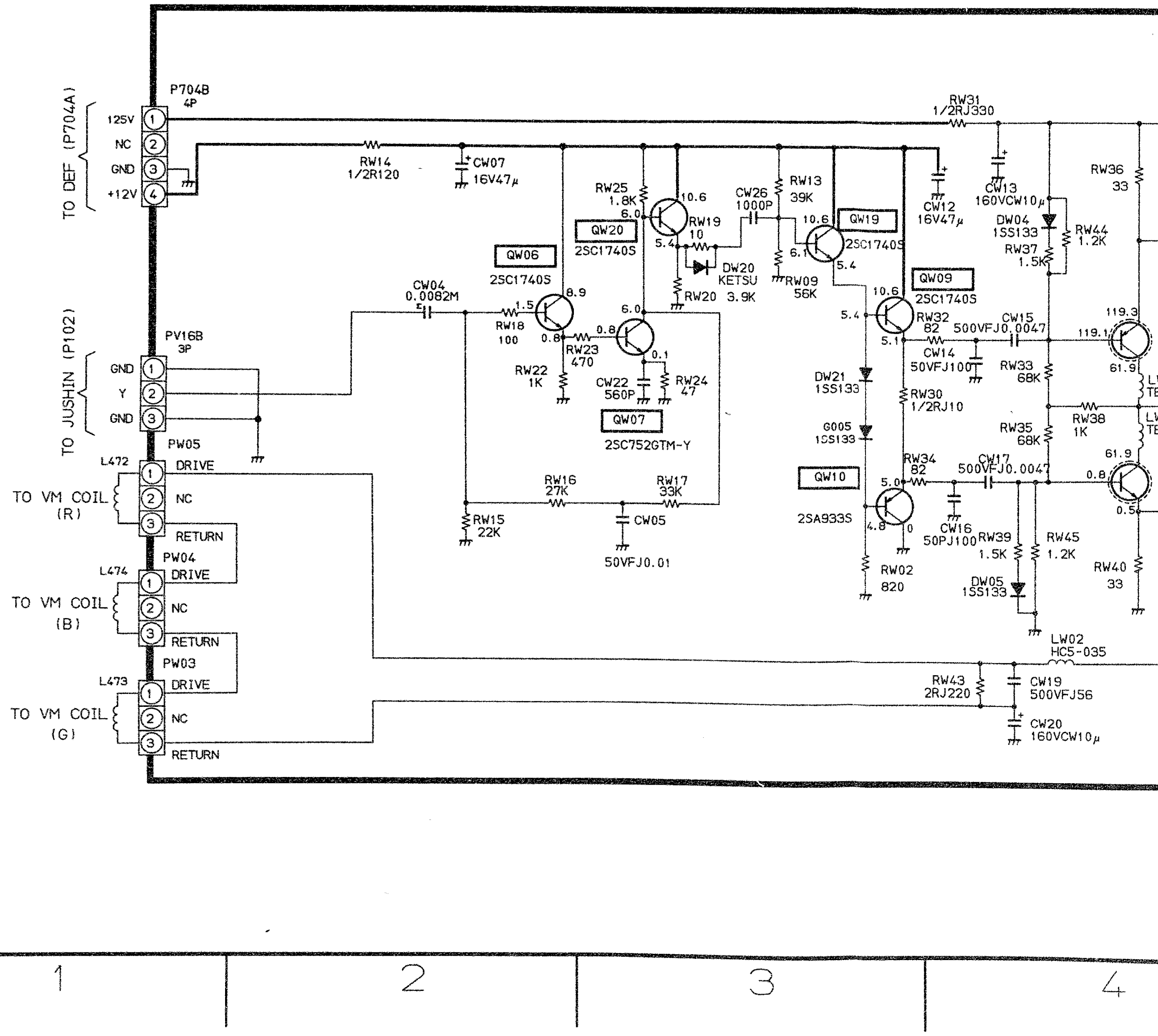

MTX-RST
DF01
MTZJ3.0A
RF11
470
A-GND
A-VDD
D-GND
D-VDD
CF06
0.1
CF05
0.1
VREF
N.C.
VDD3
N.C.
N.C.
N.C.
RES
VDD2
N.C.
N.C.
VSSA1
VDDA
VDD1
CVBS
23
22
21
20
19
18
17
16
15
14
13
12
11
10
TM
GPO
XIN
XOUT
HS
VS
TCSQ/FLD
CLK-IO
INTQ
9
8
7
6
5
4
3
2
1
GPO
INTQ
XF01
20.45MHz
CF03
CH22
CF02
CH22
QF01
DA5275-3P
A-VDD
D-VDD
A-VDD
CF04
OPEN
RF08
OPEN
GJ02
OPEN
RF09
68K
RF10
10K
D-VDD
QF33
2SC2712Y
2SC2412K
RF05
6.8K
GJ01
OPEN
RF06
22K
RF07
3.3K
QF32
2SC3437Y-L
CF01
OPEN
RF01
10K
RF03
10K
RF02
15K
RF04
1K
SYNC-SW
TPF1
TPF2
TPF3
TPF4

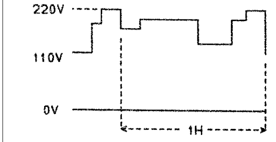

QF05
AT24C08N-10SC-TEL (RA)
AT24C08N-10SC (RB)
(8kbit EEPROM)
SOP-8
GND
A2
A1
A0
SDA
SCL
WP
Vcc
CF24
0.01
RF43
3.3K
RF44
3.3K
RF52
3.3K
GJ08
OPEN
RF45
10K
RF31
10K
QF35
2SC2712Y
2SC2412K
RF46
470
P5.1
P5.0
VAGND
VAREF
GPO
INTQ
TCS-ON
V-SYNC IN
MTX-RST
P2.10
ENA
EXOIN
P6.7
SCL1
SDA1
P6.4
P6.3
P6.2
CS1
CS0
P5.2
P5.3
P5.14
P5.15
Vss
XTAL1
XTAL2
VDD
SCL0
SDA0
P3.2
P3.3
P3.4
P3.5
P3.6
I2CSN
MRST
MTSR
TxD0
RxD0
P3.12
SCLK
CF43
0.1
CF41
CH4.7
XF02
16MHz
CF42
CH4.7
RF47
CHIP-JP
CF39
OPEN
CF40
OPEN
TPF1
TPF2
TPF3
TPF4
RF24
3.3K
RF25
3.3K
CF17
100
NMI
RSTOUT
RSTIN
VDD
Vss
A15
A14
A13
A12
A11
A10
A9
A8
VDD
Vss
A7
A6
A5
A4
A3
A2
A1
RF42
47K
CF22
0.1
CF21
0.1
QF02
SAB-C161RI-L16M
(SUB-μCOM)
MQFP-100


C
D
E
F
G
H
QF05
AT24C08N-10SC-TEL (RA)
AT24C08N-10SC (RB)
(8kbit EEPROM)
SOP-8
A2
A1
A0
SCL
WP
Vcc
CF24
0.01
RF43
3.3K
RF44
3.3K
CS1
CS0
P6.4
P6.3
P6.2
NMI
RSTOUT
RSTIN
VDD
Vss
RF42
47K
CF22
0.1
CF21
0.1
CLKCFG2
RF41
16M
A15
A14
A13
A12
A11
A10
A9
A8
A7
A6
A5
A4
A3
A2
A1
A0
QF03
Am29F040B-70JC
(512Kx8bit FLASH)
PLCC-32
A12
A15
A16
A18
Vcc
WE
A17
OE
RD
CE
CS0
D0
D1
D2
GND
D3
D4
D5
D6
D7
CF60
0.1

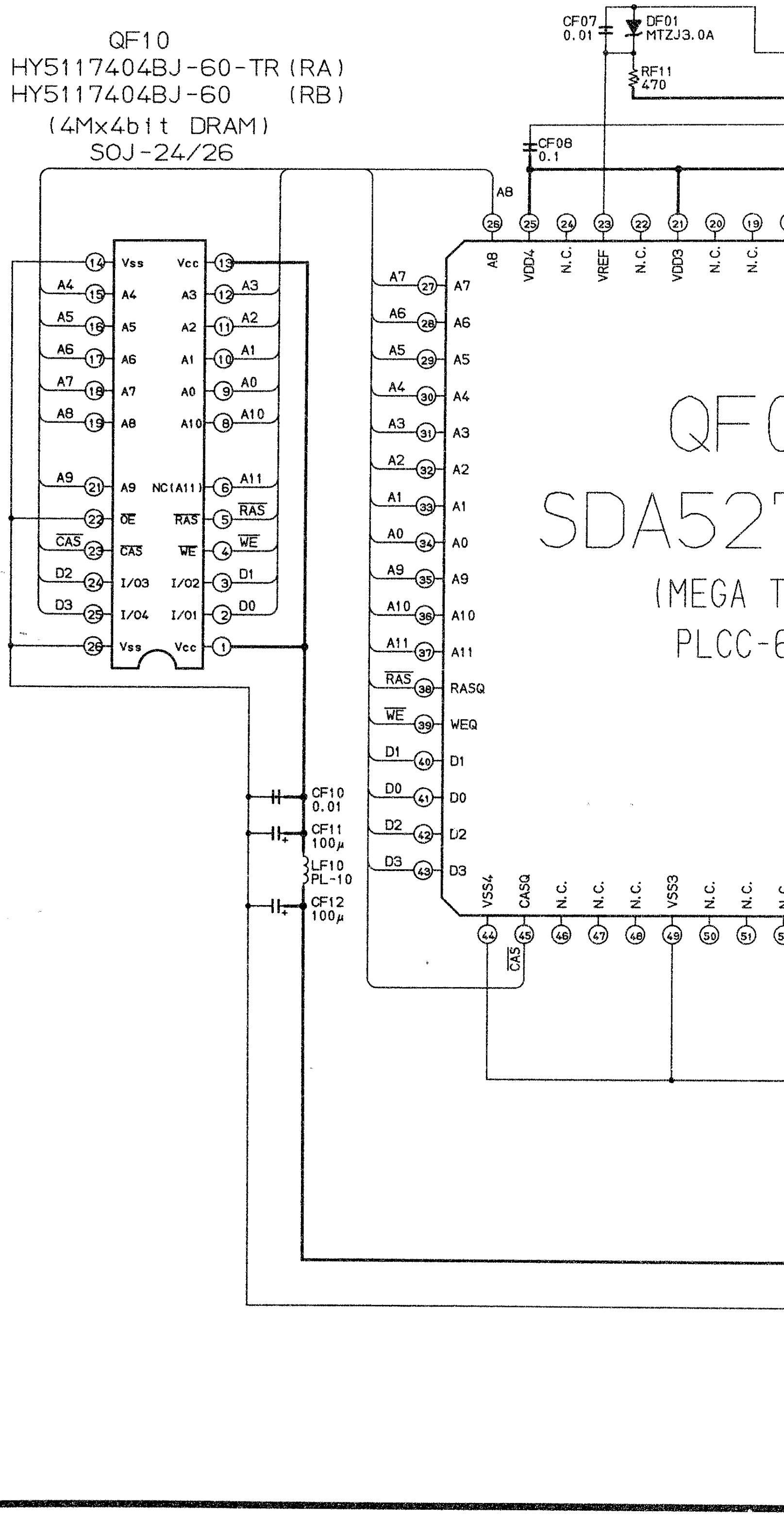

G
H
I
220V
110V
0V
1H
C961 16V100μ
OPEN D962 SHORT
R965 470
Q962 2SA562
R967 1K
R969 10K
R973 680G
Q966 2SA1015Y
R962 360
D961 SHORT
C962 16V10μ
R964 3.3K
R966 820
L962 TRF4479AC
R968 68
C963 0.01
Q964 2SA1015Y
R977 4.7KG
R970 2.2K
R972 470G
R975 2.4K
C964 0.01
R978 680G
D966 1SS133
Q963 2SC1815Y
R974 680G
Q965 2SC1815Y
C905 OPEN
R935 OPEN
R931 3R15K
R932 3R15K
V901 P16LNU10(RFA) 23312813
R903 1/2S1K
K
H
G1
G4
G2
Fo
Sc
TO FOCUS PACK
R936 33
C903 0.01
Q901 2SC1569
G001 JP
R9702 1K
C923
16V47μ
C902 16V10μ
D901 1SS133
D903 1SS133
R904 OPEN
G002 OPEN
G003 JP
D904 OPEN
Q902 2SC1815Y
R901 100
D902 1SS133
D970 OPEN
V901A CRT SOCKET
C901 2KV 1000
1P
P906
P907
1P
R909 150
R905 39
R908 56
C904 470 SL
R906 620
W/B
NC
BLK
R IN
GND
Vref
+9V
HEATER
DEF GND
NC
200V
TO GREEN CRT-D (P914A)
P914B 12P

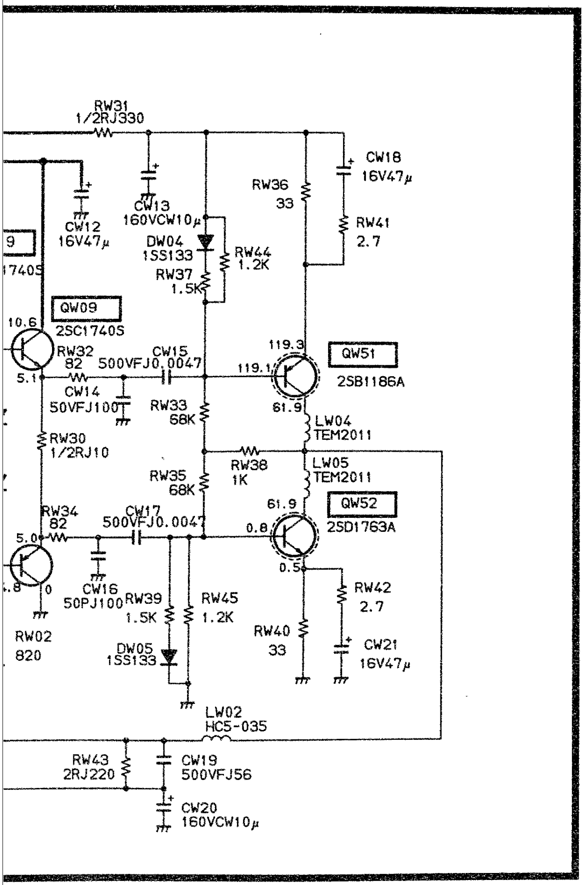
SVM


J
K
L
1
2
3
4
TO DEF (P704A)
P704B 4P
125V
NC
GND
+12V
RW31 1/2RJ330
RW14 1/2R120
CW07 16V47μ
RW25 1.8K
CW26 1000P
RW13 39K
QW19
QW20
2SC1740S
RW19 10
CW12 16V47μ
CW13 160VCW10μ
RW36 33
DW04 1SS133
RW44 1.2K
RW37 1.5K
QW06
2SC1740S
DW20 KETSU
RW09 56K
RW20 3.9K
QW09 2SC1740S
CW04 0.0082M
RW18 100
RW23 470
RW32 82
CW15 500VFJ0.0047
RW22 1K
CW22 560P
RW24 47
CW14 50VFJ100
RW33 68K
QW07
2SC752GTM-Y
DW21 1SS133
RW30 1/2RJ10
G005 1SS133
RW35 68K
RW38 1K
TO JUSHIN (P102)
PV16B 3P
GND
Y
GND
PW05
L472
DRIVE
NC
RETURN
TO VM COIL (R)
QW10
2SA933S
RW34 82
CW17 500VFJ0.0047
RW16 27K
RW17 33K
RW15 22K
CW05 50VFJ0.01
CW16 50PJ100
RW39 1.5K
RW45 1.2K
RW40 33
RW02 820
DW05 1SS133
PW04
L474
TO VM COIL (B)
LW02 HC5-035
PW03
L473
TO VM COIL (G)
RW43 2RJ220
CW19 500VFJ56
CW20 160VCW10μ



FOCUS
K


QF10
HY5117404BJ-60-TR (RA)
HY5117404BJ-60 (RB)
(4Mx4bit DRAM)
SOJ-24/26
Vss
Vcc
A4
A5
A6
A7
A8
A9
A3
A2
A1
A0
A10
NC(A11)
A11
OE
RAS
CAS
WE
D2
D3
D1
D0
I/03
I/04
I/02
I/01
CF07
0.01
DF01
MTZJ3.0A
RF11
470
CF08
0.1
CF10
0.01
CF11
100μ
LF10
PL-10
CF12
100μ
VDD4
N.C.
VREF
VDD3
RASQ
WEQ
VSS4
CASQ
VSS3
QF0
SDA52
(MEGA T
PLCC-6


RW31
1/2RJ330
CW12
16V47μ
CW13
160VCW10μ
DW04
1SS133
RW44
1.2K
RW37
1.5K
RW36
33
CW18
16V47μ
RW41
2.7
QW09
2SC1740S
1740S
10.6
5.1
RW32
82
500VFJ0.0047
CW15
CW14
50VFJ100
RW33
68K
119.3
119.1
QW51
2SB1186A
61.9
LW04
TEM2011
RW30
1/2RJ10
RW38
1K
RW35
68K
LW05
TEM2011
QW52
2SD1763A
RW34
82
5.0
CW17
500VFJ0.0047
0.8
0.5
CW16
50PJ100
RW39
1.5K
RW45
1.2K
DW05
1SS133
RW40
33
RW42
2.7
CW21
16V47μ
RW02
820
LW02
HC5-035
RW43
2RJ220
CW19
500VFJ56
CW20
160VCW10μ

NOTE:

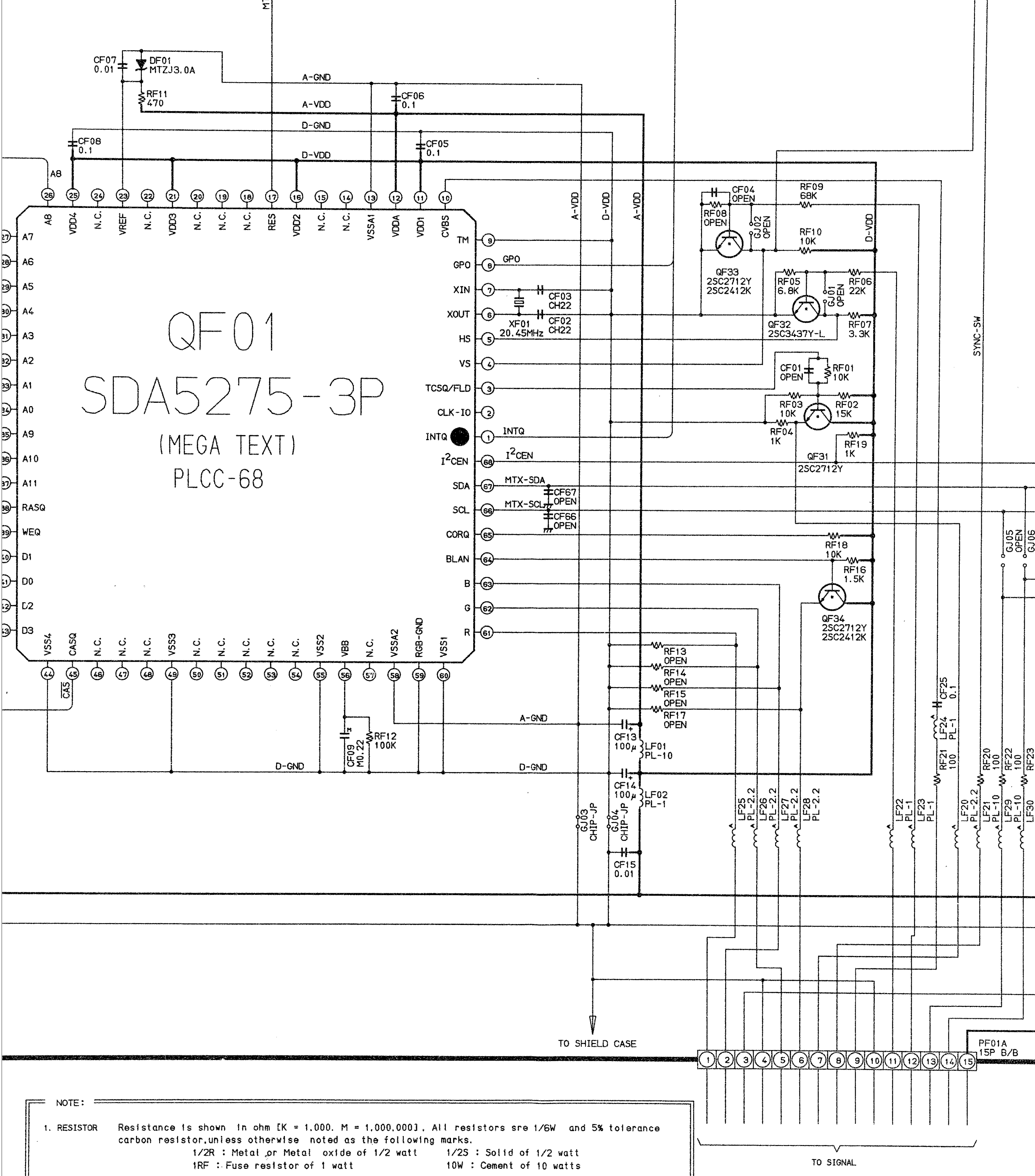
1. RESISTOR Resistance is shown i
carbon resistor,unless
1/2R : Me
1RF : Fus
K = ±10%

2.CAPACITOR Unless otherwise noted
values more than 1 in
All capacitors are cer
+|| Elect

3. The parts indicated with "⚠" have

4. This schematic diagram is the lates
modification notices.

4 5 6 7


QF01
SDA5275-3P
(MEGA TEXT)
PLCC-68
CF07
0.01
DF01
MTZJ3.0A
RF11
470
A-GND
A-VDD
D-GND
D-VDD
CF06
0.1
CF08
0.1
CF05
0.1
A8
A8
VDD4
N.C.
VREF
N.C.
VDD3
N.C.
N.C.
N.C.
RES
VDD2
N.C.
N.C.
VSSA1
VDDA
VDD1
CVBS
A7
A6
A5
A4
A3
A2
A1
A0
A9
A10
A11
RASQ
WEQ
D1
D0
D2
D3
TM
GPO
XIN
XOUT
HS
VS
TCSQ/FLD
CLK-IO
INTQ
I²CEN
SDA
SCL
CORQ
BLAN
B
G
R
GPO
CF03
CH22
XF01
20.45MHz
CF02
CH22
INTQ
I²CEN
MTX-SDA
MTX-SCL
CF67
OPEN
CF66
OPEN
VSS4
CASQ
N.C.
N.C.
N.C.
VSS3
N.C.
N.C.
N.C.
N.C.
N.C.
VSS2
VBB
N.C.
VSSA2
RGB-GND
VSS1
CAS
CF09
M0.22
RF12
100K
A-GND
D-GND
D-GND
A-VDD
D-VDD
A-VDD
CF04
OPEN
RF08
OPEN
GJ02
OPEN
RF09
68K
RF10
10K
D-VDD
QF33
2SC2712Y
2SC2412K
RF05
6.8K
GJ01
OPEN
RF06
22K
QF32
2SC3437Y-L
RF07
3.3K
CF01
OPEN
RF01
10K
RF03
10K
RF02
15K
RF04
1K
RF19
1K
QF31
2SC2712Y
RF18
10K
RF16
1.5K
QF34
2SC2712Y
2SC2412K
RF13
OPEN
RF14
OPEN
RF15
OPEN
RF17
OPEN
CF13
100μ
LF01
PL-10
CF14
100μ
LF02
PL-1
CF15
0.01
GJ03
CHIP-JP
GJ04
CHIP-JP
LF25
PL-2.2
LF26
PL-2.2
LF27
PL-2.2
LF28
PL-2.2
LF22
PL-1
LF23
PL-1
CF25
0.1
LF24
PL-1
RF21
100
RF20
100
RF22
100
RF23
LF20
PL-2.2
LF21
PL-10
LF29
PL-10
LF30
GJ05
OPEN
GJ06
SYNC-SW
M1
TO SHIELD CASE
PF01A
15P B/B
TO SIGNAL
7
8
9
10

NOTE:

1. RESISTOR Resistance is shown in ohm [K = 1,000, M = 1,000,000]. All resistors sre 1/6W and 5% tolerance carbon resistor,unless otherwise noted as the following marks.

1/2R : Metal or Metal oxide of 1/2 watt   1/2S : Solid of 1/2 watt
1RF : Fuse resistor of 1 watt   10W : Cement of 10 watts

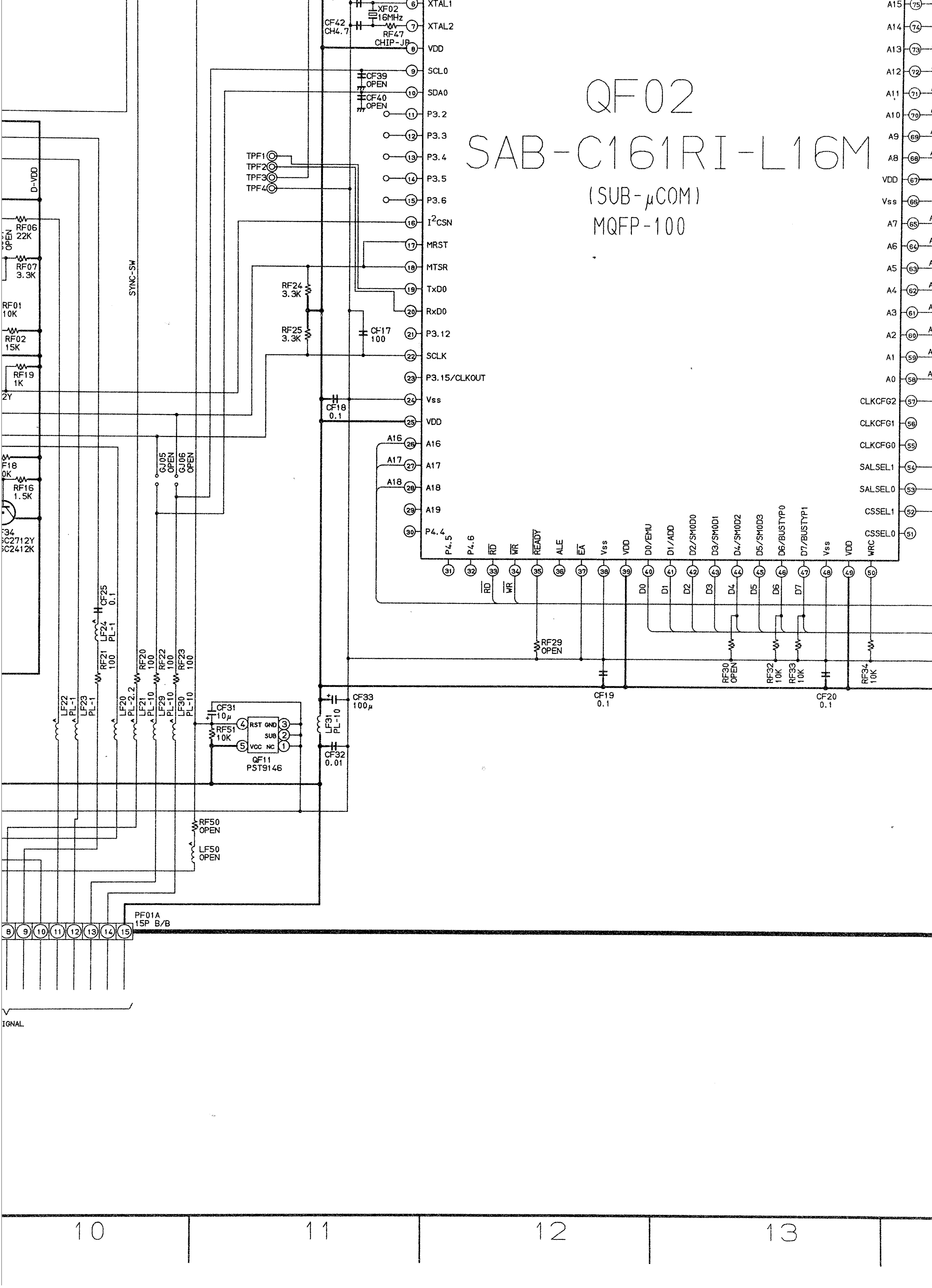
K = ±10% G = ±2% F = ±1%

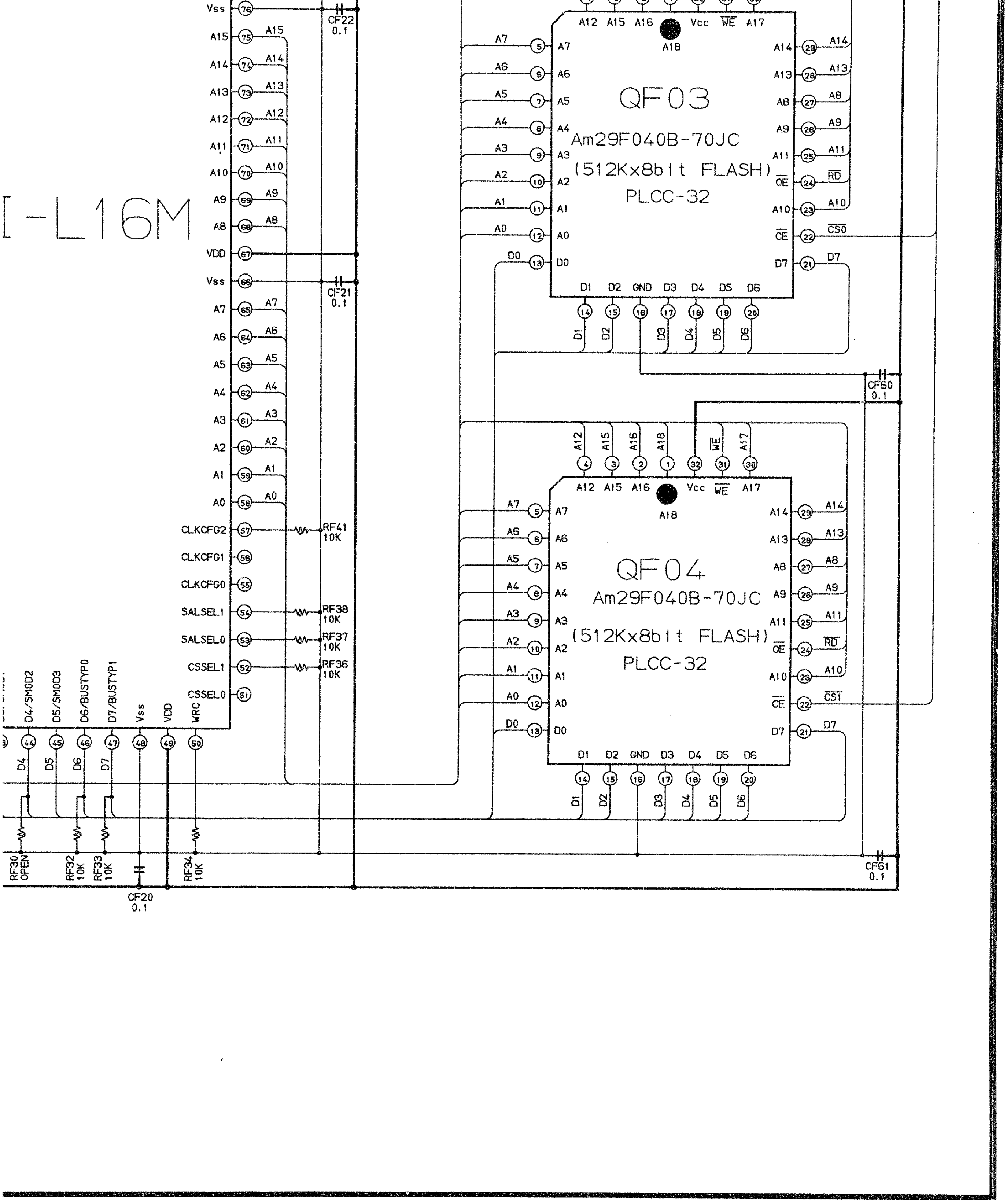
2. CAPACITOR Unless otherwise noted in schematic,all capacitor valuse less than 1 are expressed in μF.and the values more than 1 in pF.
All capacitors are ceramic 50V, unless otherwise noted as the following marks.

Electrolitic capacitor   Mylar capacitor

3. The parts indicated with "⚠" have specialcharacteristics should be replaced with identical parts only.

4. This schematic diagram is the latest the time of copying. so it must be changet in acordance with all informed modification notices.


QF02
SAB-C161RI-L16M
(SUB-μCOM)
MQFP-100
XTAL1
XTAL2
VDD
SCL0
SDA0
P3.2
P3.3
P3.4
P3.5
P3.6
I²CSN
MRST
MTSR
TxD0
RxD0
P3.12
SCLK
P3.15/CLKOUT
Vss
VDD
A16
A17
A18
A19
P4.4
P4.5
P4.6
RD
WR
READY
ALE
EA
Vss
VDD
D0/EMU
D1/ADD
D2/SMOD0
D3/SMOD1
D4/SMOD2
D5/SMOD3
D6/BUSTYP0
D7/BUSTYP1
Vss
VDD
WRC
CSSEL0
CSSEL1
SALSEL0
SALSEL1
CLKCFG0
CLKCFG1
CLKCFG2
A0
A1
A2
A3
A4
A5
A6
A7
Vss
VDD
A8
A9
A10
A11
A12
A13
A14
A15
XF02
16MHz
CF42
CH4.7
RF47
CHIP-JP
CF39
OPEN
CF40
OPEN
TPF1
TPF2
TPF3
TPF4
RF24
3.3K
RF25
3.3K
CF17
100
CF18
0.1
D-VDD
SYNC-SW
RF06
22K
OPEN
RF07
3.3K
RF01
10K
RF02
15K
RF19
1K
2Y
F18
0K
RF16
1.5K
F34
C2712Y
C2412K
GJ05
OPEN
GJ06
OPEN
CF25
0.1
LF24
PL-1
RF21
100
RF20
100
RF22
100
RF23
100
LF22
PL-1
LF23
PL-1
LF20
PL-2.2
LF21
PL-10
LF29
PL-10
LF30
PL-10
CF31
10μ
RF51
10K
RST
GND
SUB
VCC
NC
QF11
PST9146
LF31
PL-10
CF33
100μ
CF32
0.01
RF29
OPEN
CF19
0.1
RF30
OPEN
RF32
10K
RF33
10K
CF20
0.1
RF34
10K
RF50
OPEN
LF50
OPEN
PF01A
15P B/B
IGNAL
10
11
12
13


I-L16M
Vss 76
A15 75
A14 74
A13 73
A12 72
A11 71
A10 70
A9 69
A8 68
VDD 67
Vss 66
A7 65
A6 64
A5 63
A4 62
A3 61
A2 60
A1 59
A0 58
CLKCFG2 57
CLKCFG1 56
CLKCFG0 55
SALSEL1 54
SALSEL0 53
CSSEL1 52
CSSEL0 51
D4/SMOD2 44
D5/SMOD3 45
D6/BUSTYP0 46
D7/BUSTYP1 47
Vss 48
VDD 49
WRC 50
CF22 0.1
CF21 0.1
CF20 0.1
RF41 10K
RF38 10K
RF37 10K
RF36 10K
RF30 OPEN
RF32 10K
RF33 10K
RF34 10K
QF03
Am29F040B-70JC
(512Kx8bit FLASH)
PLCC-32
QF04
Am29F040B-70JC
(512Kx8bit FLASH)
PLCC-32
A12 A15 A16 A18 Vcc WE A17
A7 A6 A5 A4 A3 A2 A1 A0 D0
A14 A13 A8 A9 A11 OE A10 CE D7
D1 D2 GND D3 D4 D5 D6
RD
CS0
CS1
CF60 0.1
CF61 0.1
G
H
I
J
K
L
13
14
15
16

CRT-D R G B
SVM EPG-TEXT
50/61PJ98G 2/6
PK2975

SCHEMATIC DIAGRAM MODEL : 50PJ98G (3/6)

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 3. Do not degrade the safety of the receiver through improper servicing.

030-9915

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position. Set other controls for best picture.

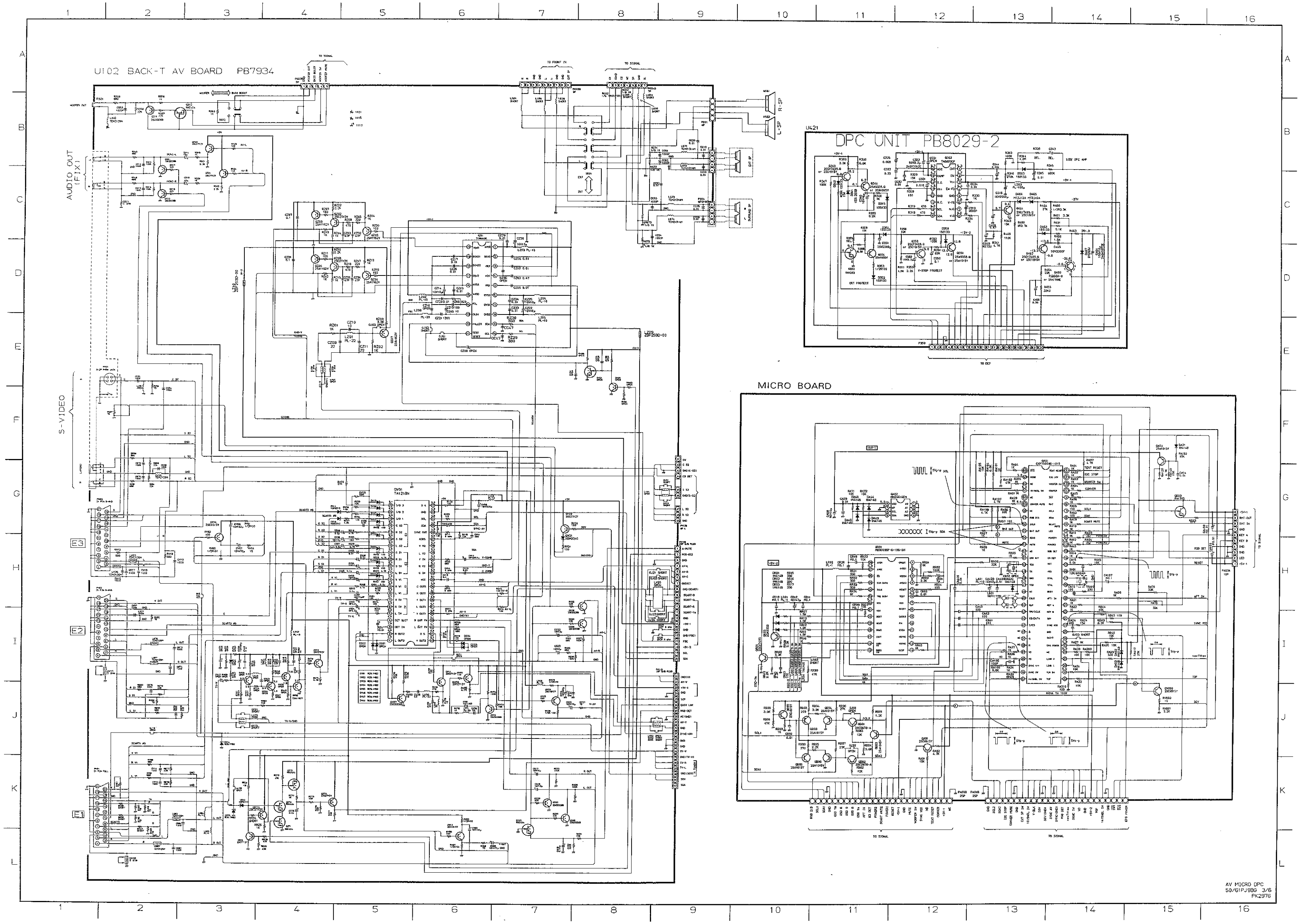
NOTES:

1. D.C. resistance value of a principal transformer is shown in this schematic diagram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

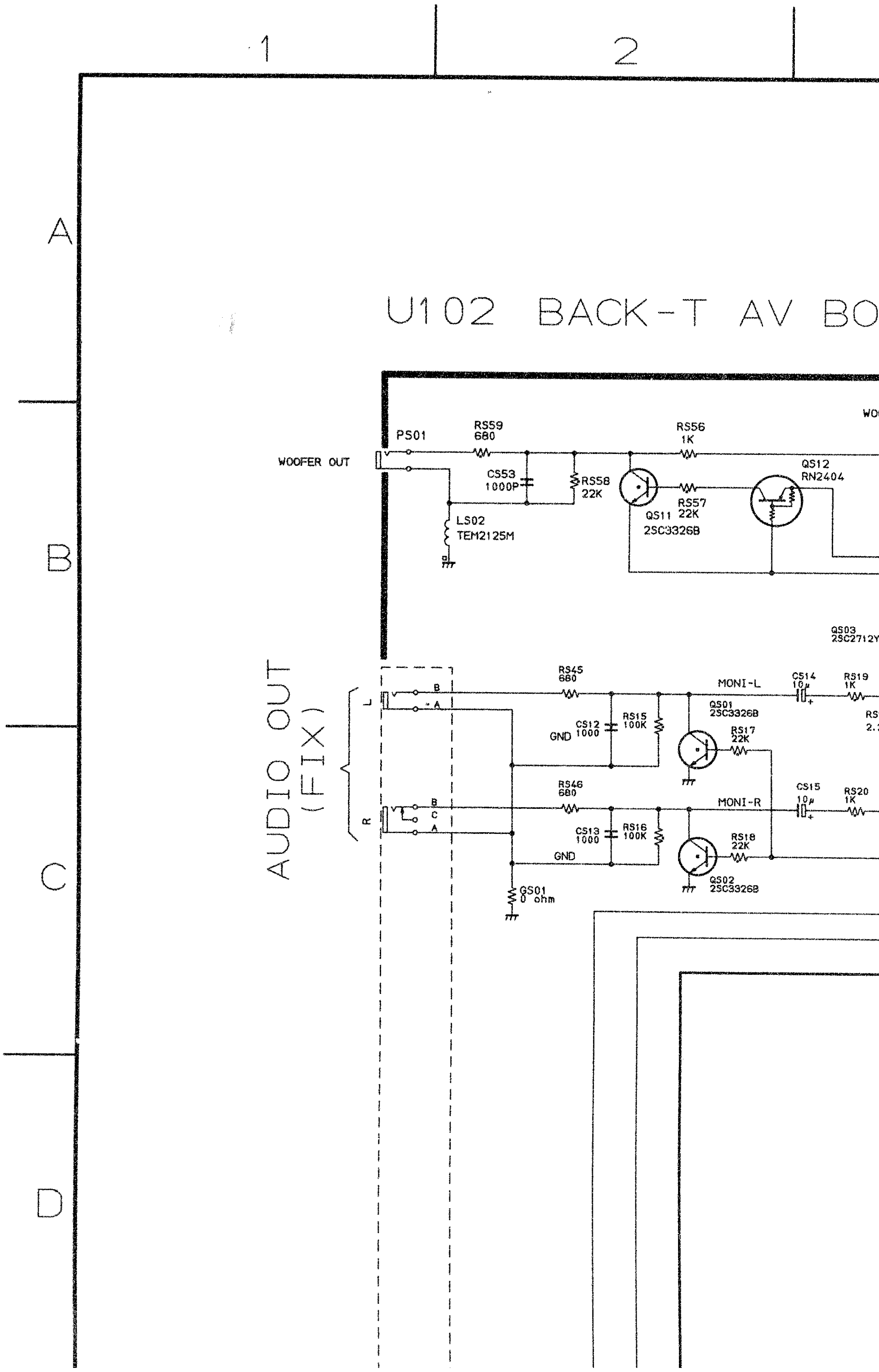
1. Resistance is shown ih ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less than 1 are expressed jn μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH, and the values less than 1 in H.



SCHEMATIC DIAGRAM MODEL : 50PJ98G (3/6)

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designa
ponents which have special characteristics important for safety and should be replaced only with type
those in the original circuit or specified in the parts list. The mounting position of replacements is to be
with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOT
3. Do not degrade the safety of the receiver through improper servicing.

030-9915

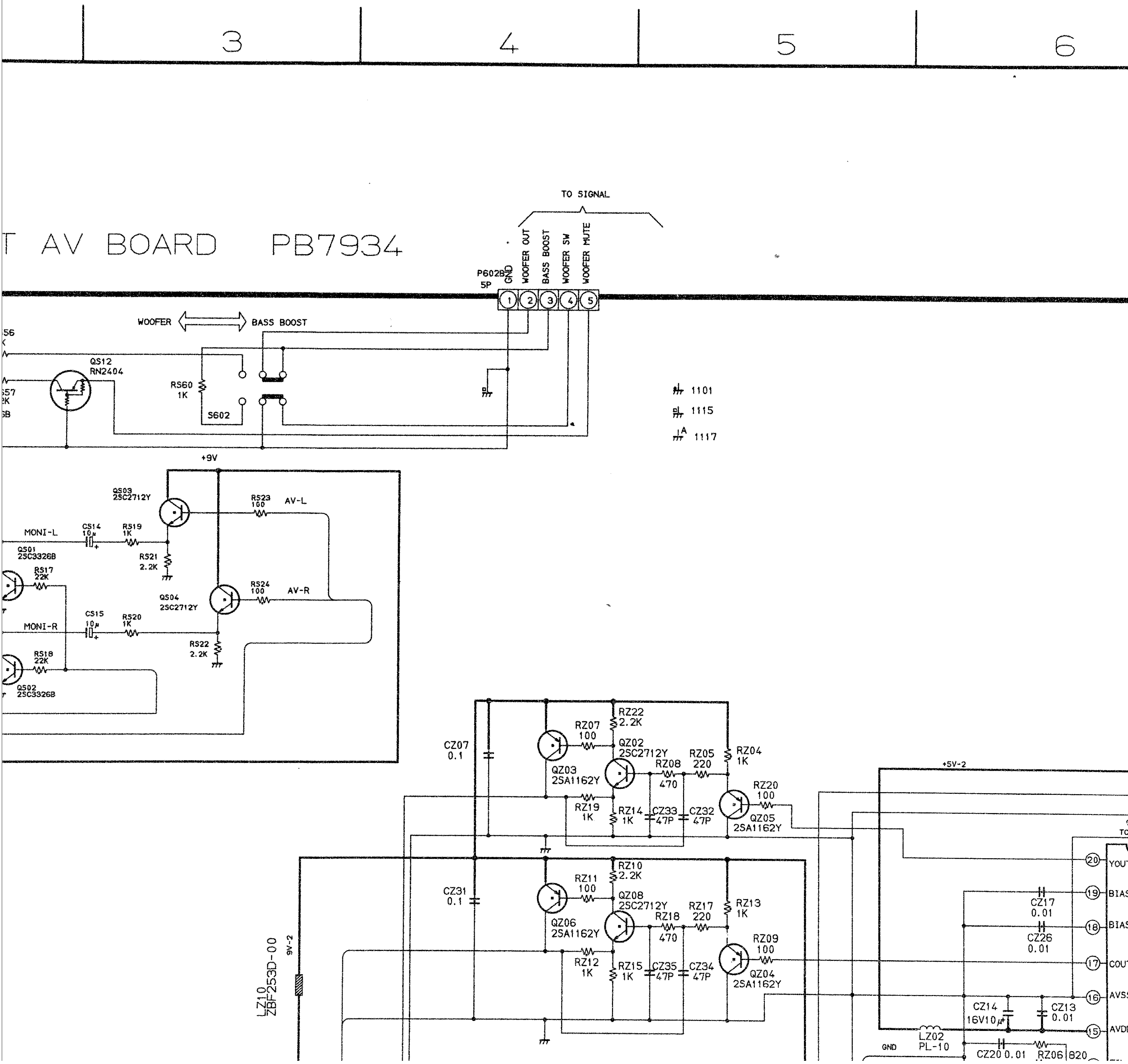

1
2
A
B
C
D
U102 BACK-T AV BO
WO
WOOFER OUT
PS01
RS59
680
CS53
1000P
RS58
22K
LS02
TEM2125M
RS56
1K
QS11
2SC3326B
RS57
22K
QS12
RN2404
QS03
2SC2712Y
AUDIO OUT
(FIX)
L
R
B
A
C
RS45
680
CS12
1000
GND
RS15
100K
MONI-L
QS01
2SC3326B
RS17
22K
CS14
10μ
RS19
1K
RS
2.
RS46
680
CS13
1000
GND
RS16
100K
MONI-R
QS02
2SC3326B
RS18
22K
CS15
10μ
RS20
1K
GS01
0 ohm

(3/6)

rts list designate com-
 only with types identical to
ements is to be identical
 SAFETY NOTICE on page

OBSERVATION OF VOLTAGES AND WAVEFORMS

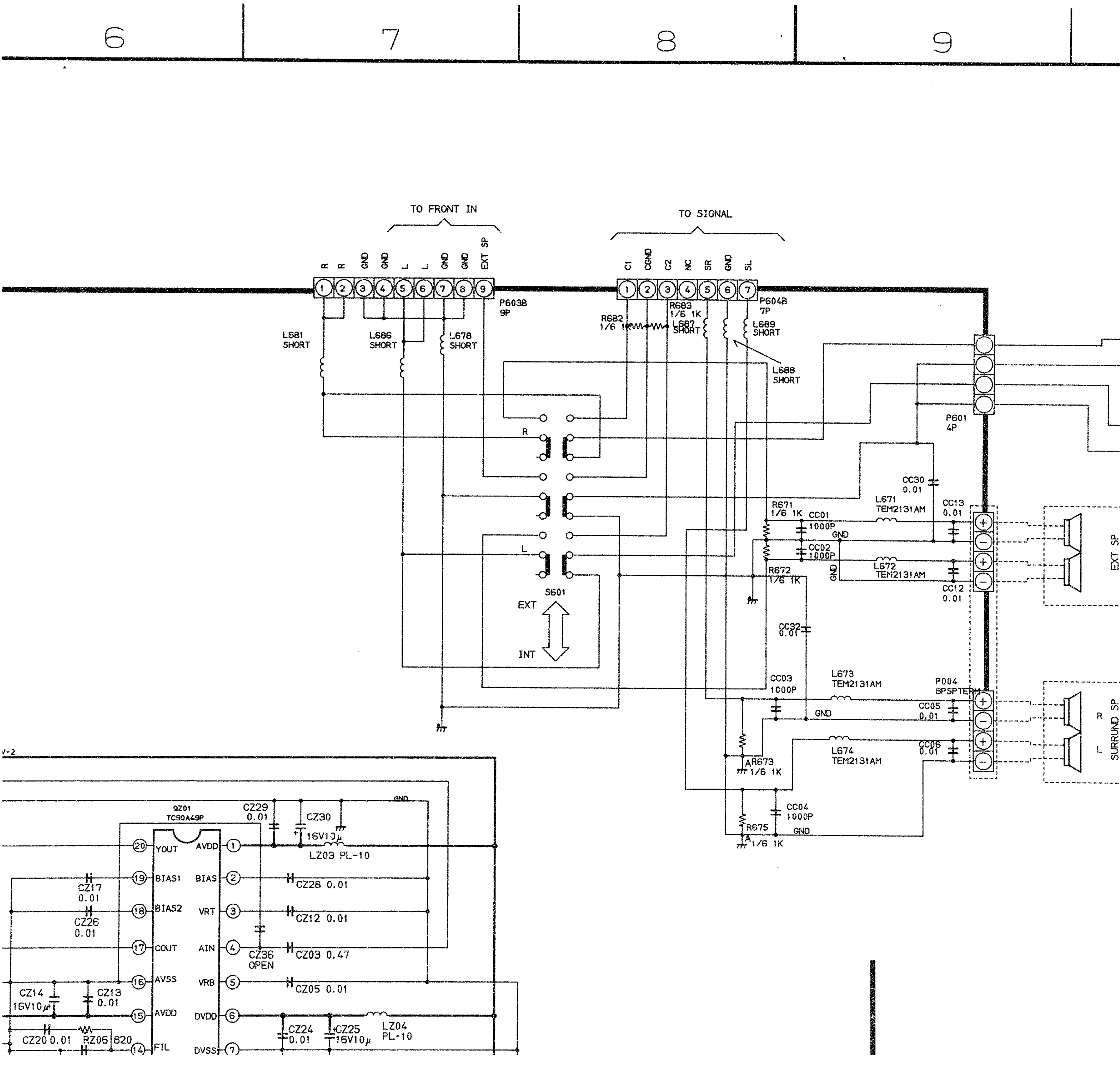
1. Voltages read with VTVM from point shown to chassis ground, li volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low c
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid BRIGHTNESS control is almost in maximum position. Set other co picture.


3
4
5
6
T AV BOARD PB7934
TO SIGNAL
P602B
5P
GND
WOOFER OUT
BASS BOOST
WOOFER SW
WOOFER MUTE
WOOFER
BASS BOOST
QS12
RN2404
RS60
1K
S602
1101
1115
1117
+9V
QS03
2SC2712Y
RS23
100
AV-L
MONI-L
CS14
10μ
RS19
1K
QS01
2SC3326B
RS21
2.2K
RS17
22K
QS04
2SC2712Y
RS24
100
AV-R
CS15
10μ
MONI-R
RS20
1K
RS22
2.2K
RS18
22K
QS02
2SC3326B
CZ07
0.1
RZ07
100
RZ22
2.2K
QZ02
2SC2712Y
QZ03
2SA1162Y
RZ08
470
RZ05
220
RZ04
1K
RZ19
1K
RZ14
1K
CZ33
47P
CZ32
47P
RZ20
100
QZ05
2SA1162Y
+5V-2
CZ31
0.1
RZ11
100
RZ10
2.2K
QZ08
2SC2712Y
QZ06
2SA1162Y
RZ18
470
RZ17
220
RZ13
1K
RZ12
1K
RZ15
1K
CZ35
47P
CZ34
47P
RZ09
100
QZ04
2SA1162Y
LZ10
ZBF253D-00
9V-2
CZ17
0.01
CZ26
0.01
CZ14
16V10μ
CZ13
0.01
LZ02
PL-10
GND
CZ20 0.01
RZ06 820
20 YOUT
19 BIAS
18 BIAS
17 COUT
16 AVSS
15 AVDD

hassis ground, line voltage 220
ary ±20%.
scope and a low capacity probe.
r signal.
trols are in mid position and
ition. Set other controls for best

NOTES:

1. D.C. resistance value of a principal transformer is
   gram. These are measured for separated from the c
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.



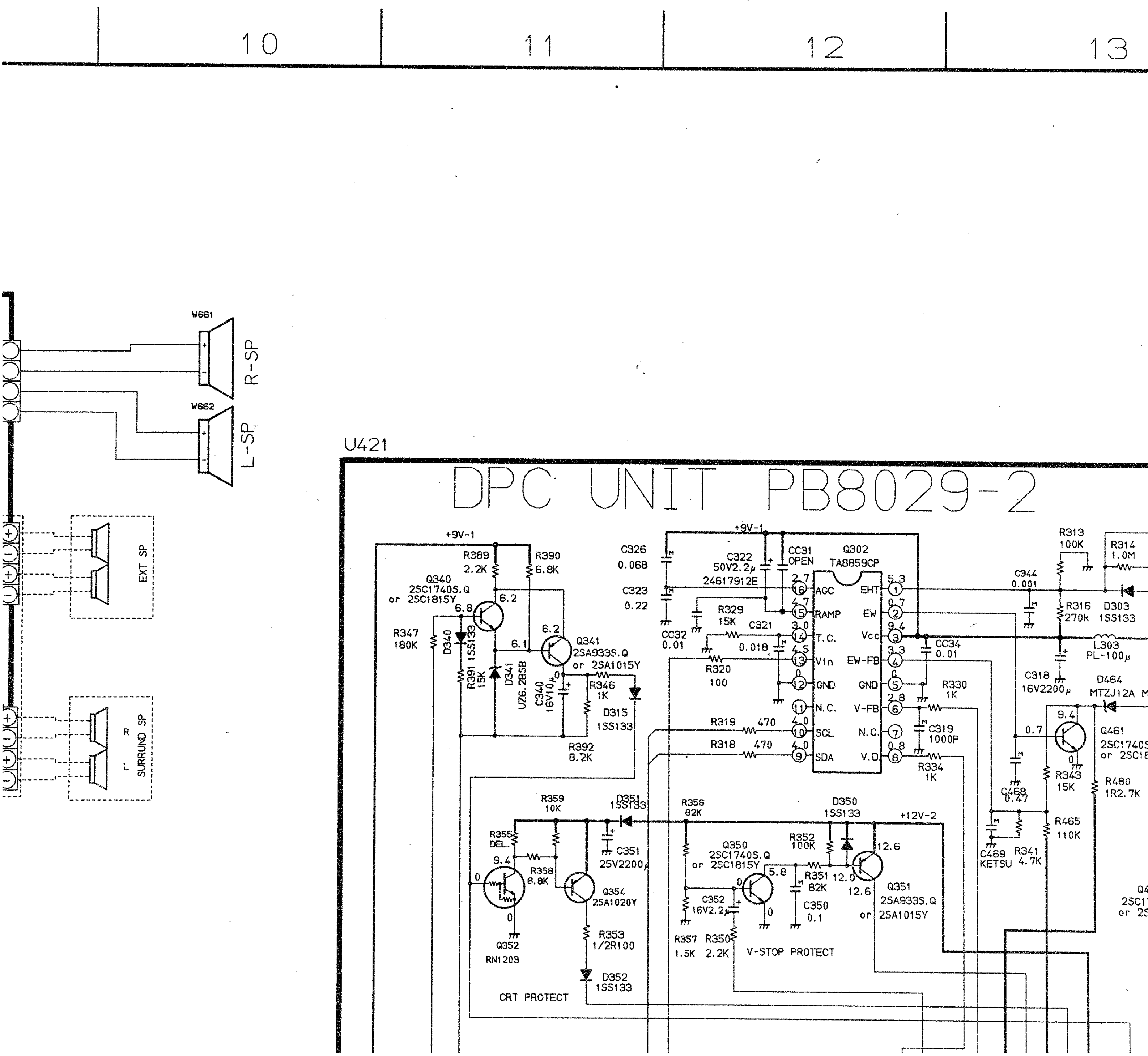
6
7
8
9
TO FRONT IN
R
R
GND
GND
L
L
GND
GND
EXT SP
1
2
3
4
5
6
7
8
9
P603B
9P
TO SIGNAL
C1
CGND
C2
NC
SR
GND
SL
1
2
3
4
5
6
7
P604B
7P
L681
SHORT
L686
SHORT
L678
SHORT
R682
1/6 1K
R683
1/6 1K
L687
SHORT
L689
SHORT
L688
SHORT
R
L
S601
EXT
INT
P601
4P
CC30
0.01
R671
1/6 1K
CC01
1000P
L671
TEM2131AM
CC13
0.01
GND
CC02
1000P
GND
R672
1/6 1K
L672
TEM2131AM
CC12
0.01
EXT SP
CC32
0.01
CC03
1000P
L673
TEM2131AM
P004
8PSPTERM
CC05
0.01
GND
L674
TEM2131AM
CC06
0.01
AR673
1/6 1K
CC04
1000P
R675
A
1/6 1K
GND
R
L
SURRUND SP
+
−
+
−
+
−
+
−
V-2
GND
QZ01
TC90A49P
CZ29
0.01
CZ30
16V10μ
LZ03 PL-10
20
YOUT
AVDD
1
19
BIAS1
BIAS
2
CZ28 0.01
CZ17
0.01
18
BIAS2
VRT
3
CZ12 0.01
CZ26
0.01
17
COUT
AIN
4
CZ36
OPEN
CZ03 0.47
16
AVSS
VRB
5
CZ05 0.01
CZ14
16V10μ
CZ13
0.01
15
AVDD
DVDD
6
CZ24
0.01
CZ25
16V10μ
LZ04
PL-10
CZ20 0.01
RZ06 820
14
FIL
DVSS
7

transformer is shown in this schematic dia-
ted from the circuit.
hout notice.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR an

1. Resistance is shown in ohm, k=1,000, M=
2. Unless other wise noted in schematic, al
   sed in μF and the values more than 1 in p
3. Unless otherwise noted in schematic, all
   sed in μH, and the values less than 1 in H

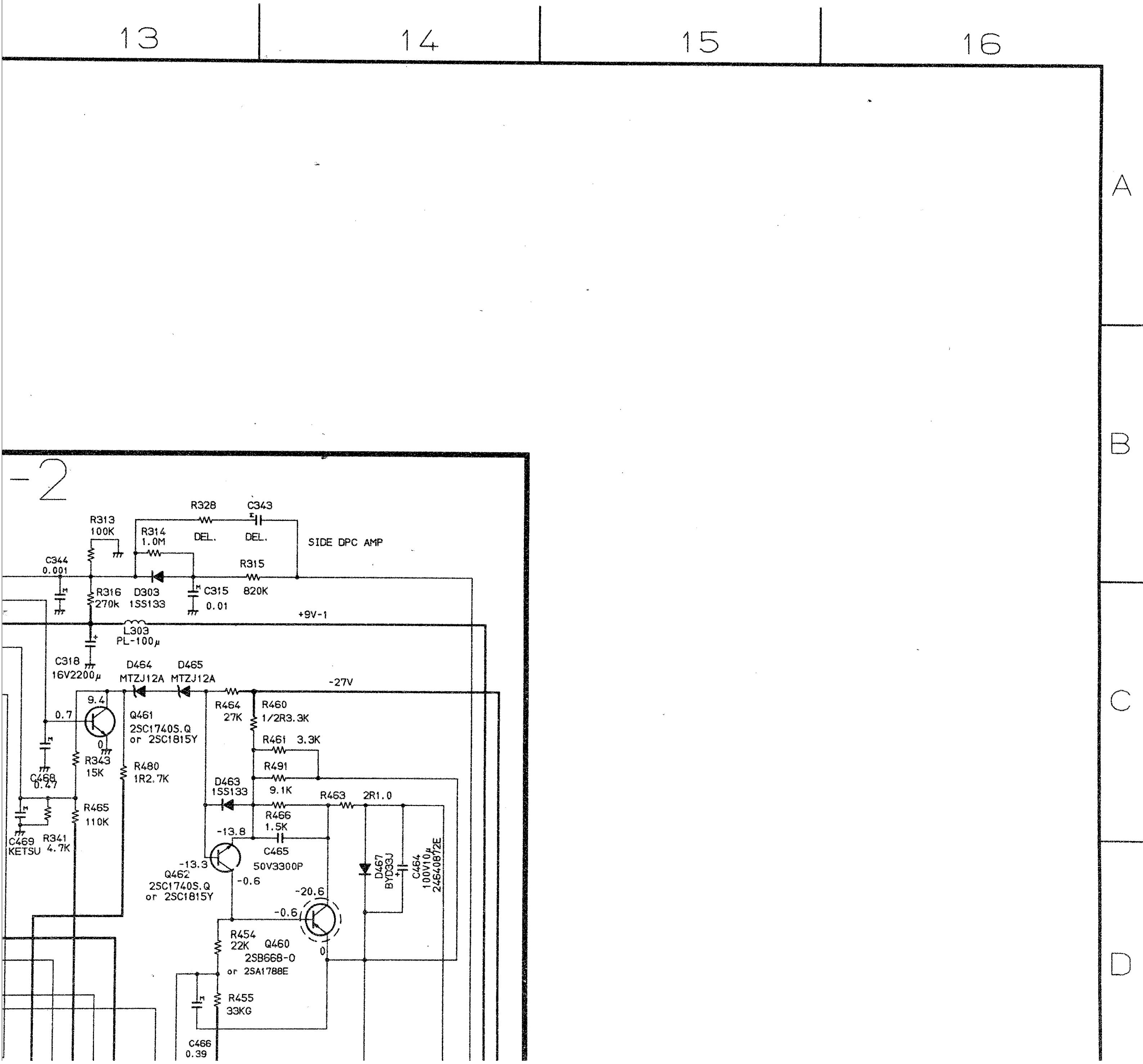

10
11
12
13
W661
R-SP
W662
L-SP
EXT SP
SURRUND SP
R
L
U421
DPC UNIT PB8029-2
+9V-1
R389 2.2K
R390 6.8K
Q340 2SC1740S.Q or 2SC1815Y
R347 180K
D340 1SS133
R391 15K
D341 UZ6.2BSB
C340 16V10μ
Q341 2SA933S.Q or 2SA1015Y
R346 1K
D315 1SS133
R392 8.2K
C326 0.068
C323 0.22
CC32 0.01
C322 50V2.2μ 24617912E
CC31 OPEN
Q302 TA8859CP
R329 15K
C321 0.018
R320 100
R319 470
R318 470
AGC
RAMP
T.C.
Vin
GND
N.C.
SCL
SDA
EHT
EW
Vcc
EW-FB
GND
V-FB
N.C.
V.D
CC34 0.01
R330 1K
C319 1000P
R334 1K
R313 100K
R314 1.0M
C344 0.001
R316 270k
D303 1SS133
L303 PL-100μ
C318 16V2200μ
D464 MTZJ12A
Q461 2SC1740S or 2SC18
R343 15K
R480 1R2.7K
C468 0.47
R465 110K
C469 KETSU
R341 4.7K
R359 10K
D351 1SS133
R355 DEL.
R358 6.8K
C351 25V2200μ
Q352 RN1203
Q354 2SA1020Y
R353 1/2R100
D352 1SS133
CRT PROTECT
R356 82K
D350 1SS133
+12V-2
Q350 2SC1740S.Q or 2SC1815Y
R352 100K
R351 82K
C350 0.1
Q351 2SA933S.Q or 2SA1015Y
C352 16V2.2μ
R357 1.5K
R350 2.2K
V-STOP PROTECT

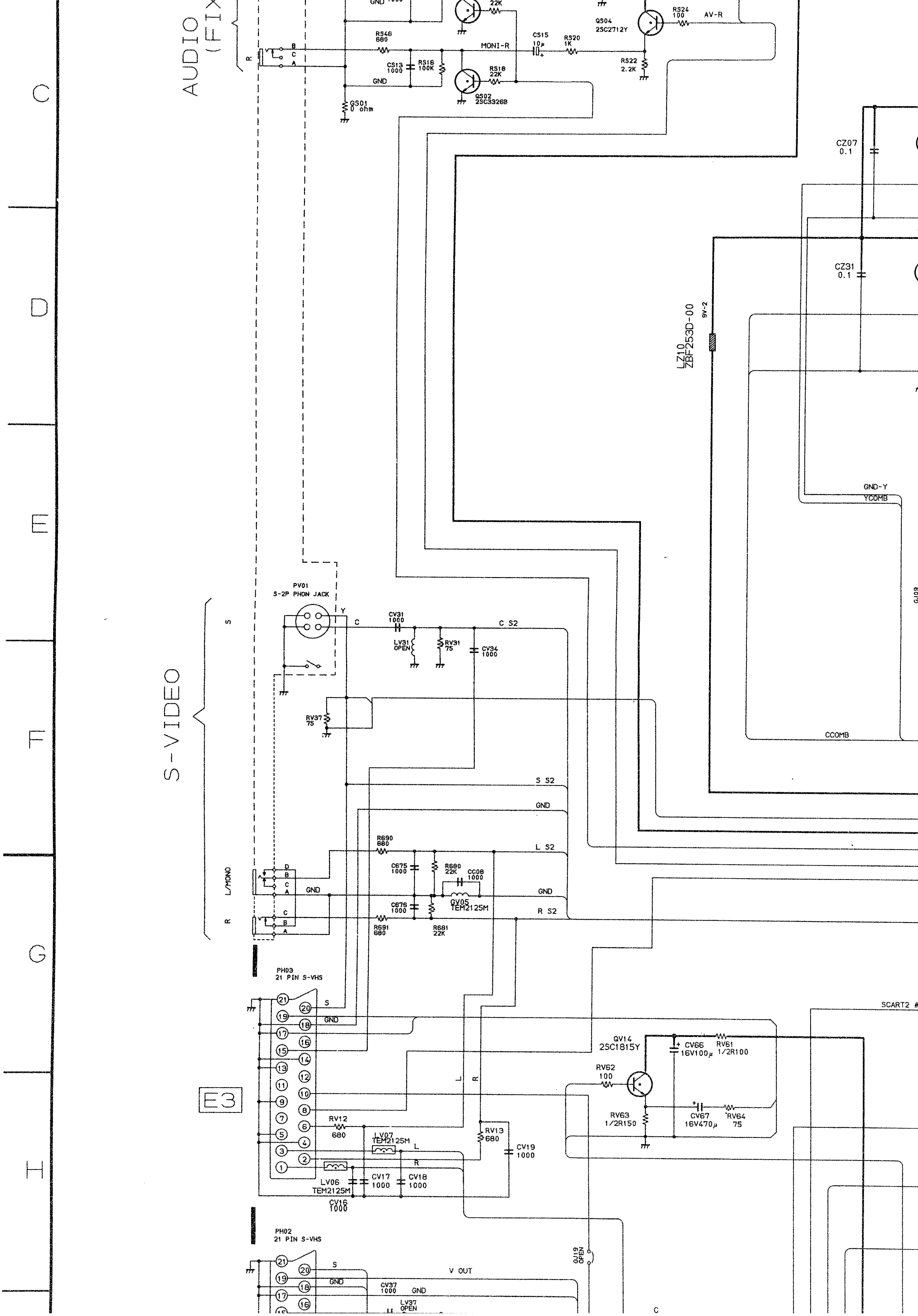
CAPACITOR and INDUCTOR

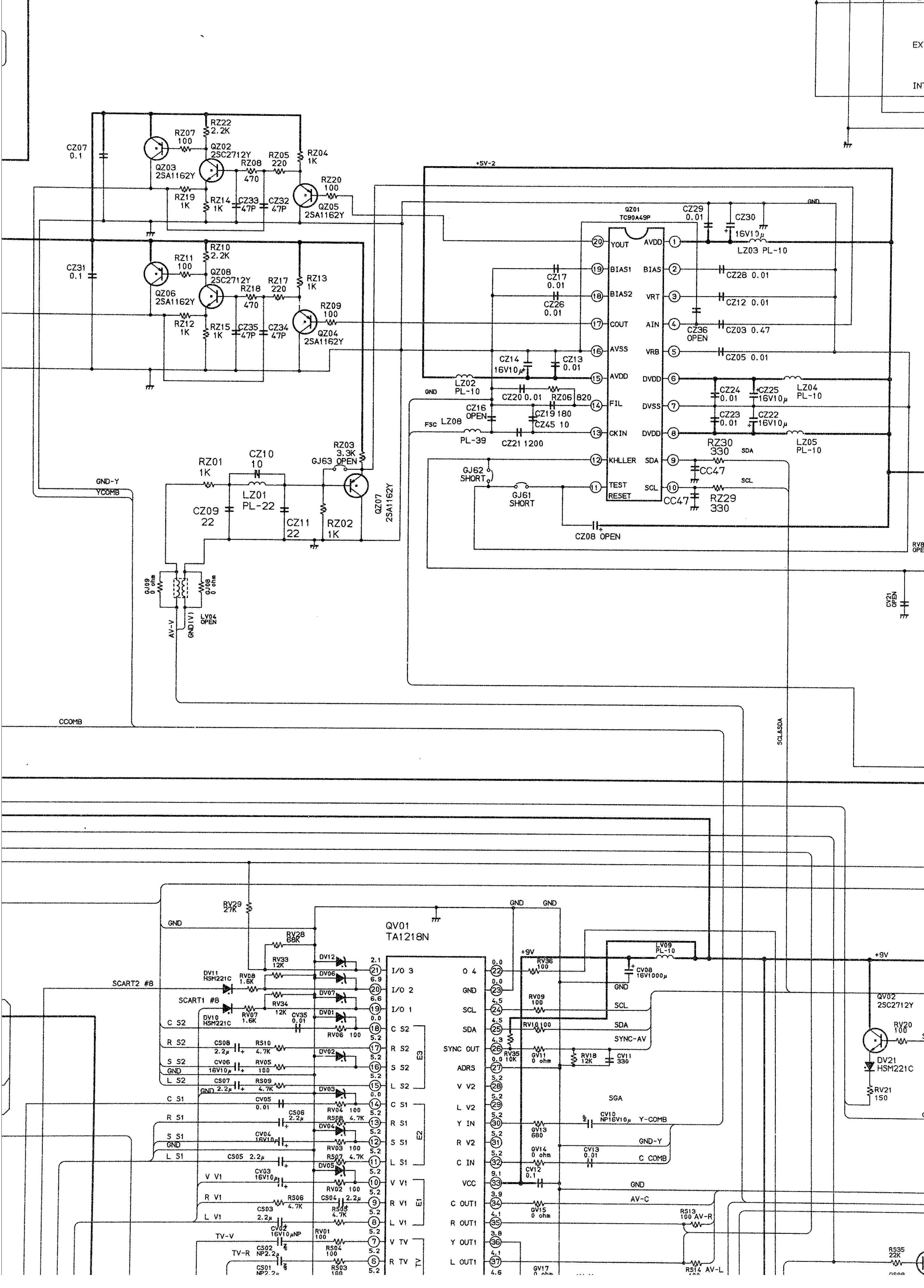
hm, k=1,000, M=1,000,000

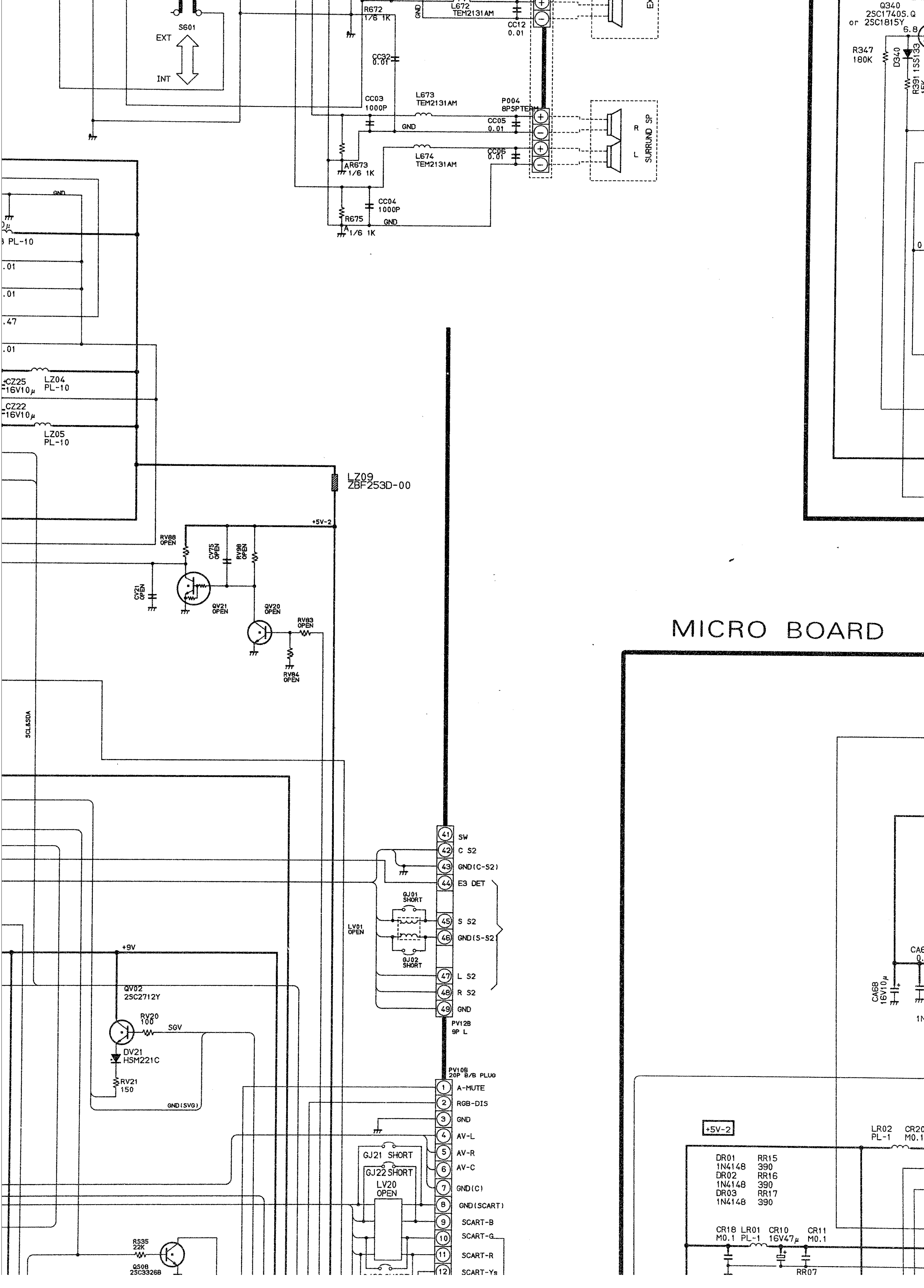
in schematic, all capacitor values less than 1 are expres-
more than 1 in pF.

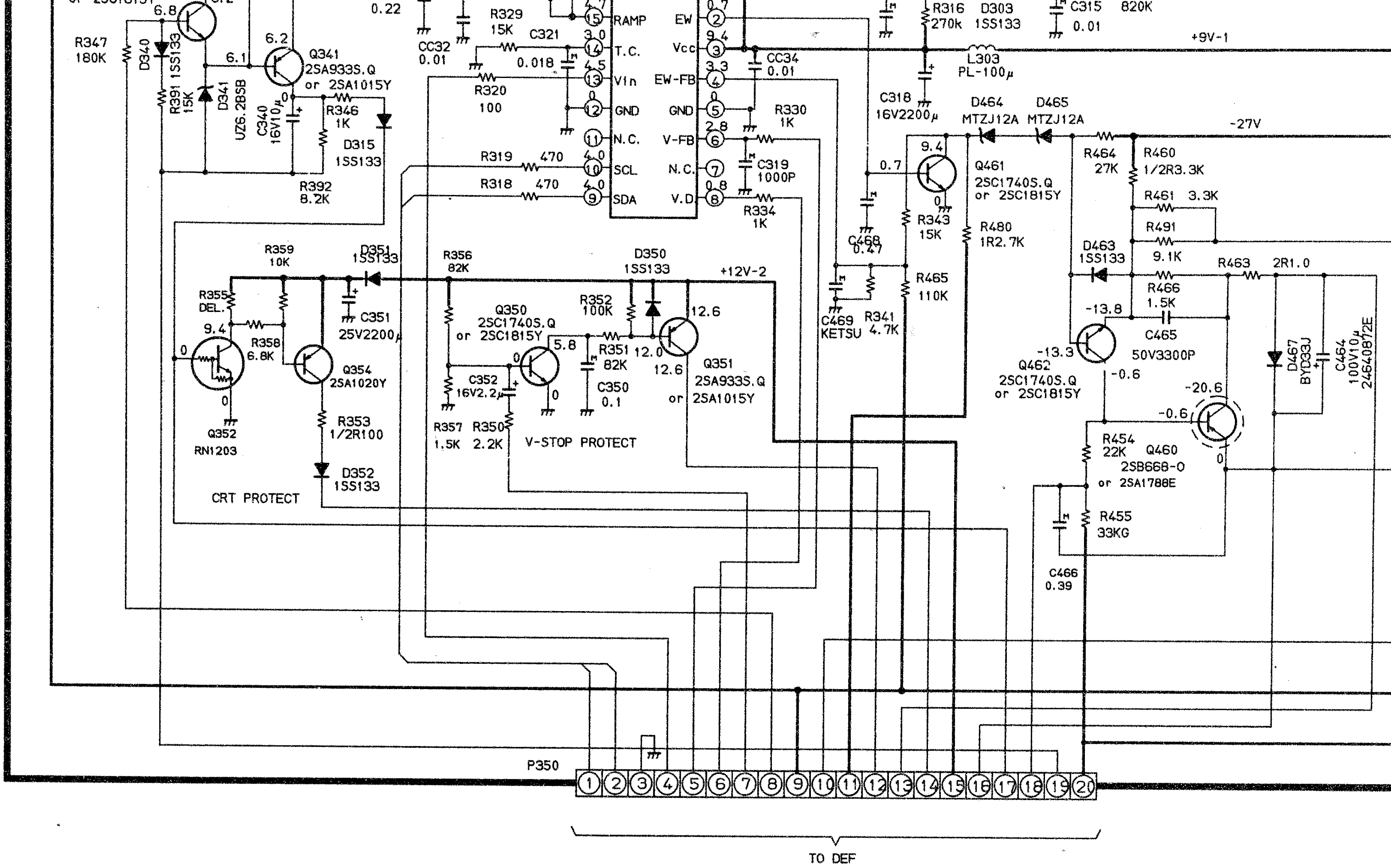
in schematic, all inductor values more than 1 are expres-
s less than 1 in H.


13
14
15
16
A
B
C
D
-2
R328
C343
DEL.
DEL.
SIDE DPC AMP
R313
100K
R314
1.0M
C344
0.001
R315
820K
R316
270k
D303
1SS133
C315
0.01
+9V-1
L303
PL-100μ
C318
16V2200μ
D464
MTZJ12A
D465
MTZJ12A
-27V
9.4
0.7
0
Q461
2SC1740S.Q
or 2SC1815Y
R464
27K
R460
1/2R3.3K
R461 3.3K
R491
9.1K
R343
15K
R480
1R2.7K
C468
0.47
D463
1SS133
R463
2R1.0
R466
1.5K
R465
110K
-13.8
C465
50V3300P
C469
KETSU
R341
4.7K
-13.3
Q462
2SC1740S.Q
or 2SC1815Y
-0.6
D467
BYD33J
C464
100V10μ
24640872E
-20.6
-0.6
R454
22K
Q460
2SB668-O
or 2SA1788E
0
R455
33KG
C466
0.39

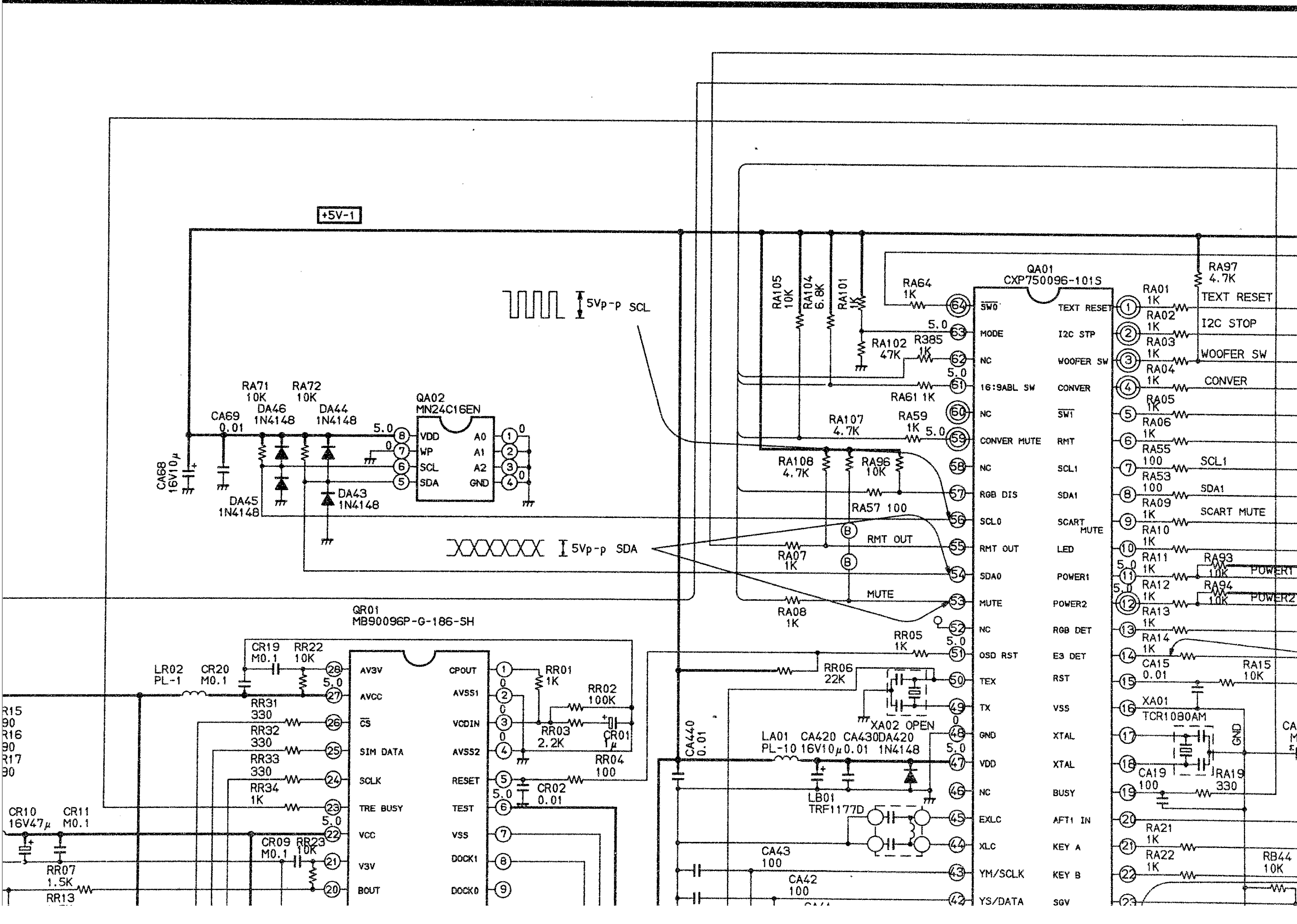

C
D
E
F
G
H
AUDIO
(FIX
R
B
C
A
GND
1000
22K
RS46
680
MONI-R
CS13
1000
RS16
100K
GND
RS18
22K
QS02
2SC3326B
GS01
0 ohm
CS15
10μ
RS20
1K
QS04
2SC2712Y
RS24
100
AV-R
RS22
2.2K
CZ07
0.1
CZ31
0.1
LZ10
ZBF253D-00
9V-2
GND-Y
YCOMB
CCOMB
GJ09
PV01
S-2P PHON JACK
Y
C
CV31
1000
C S2
LV31
OPEN
RV31
75
CV34
1000
S
S-VIDEO
RV37
75
S S2
GND
R690
680
L S2
C675
1000
R680
22K
CC08
1000
L/MONO
D
B
C
A
GND
GND
C676
1000
GV05
TEM2125M
R S2
R
C
B
A
R691
680
R681
22K
PH03
21 PIN S-VHS
21
20
S
19
GND
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
E3
L
R
RV12
680
LV07
TEM2125M
L
R
RV13
680
CV19
1000
LV06
TEM2125M
CV17
1000
CV18
1000
CV16
1000
SCART2 #
QV14
2SC1815Y
CV66
16V100μ
RV61
1/2R100
RV62
100
RV63
1/2R150
CV67
16V470μ
RV64
75
GJ19
OPEN
PH02
21 PIN S-VHS
21
20
S
19
GND
18
17
16
15
V OUT
CV37
1000
GND
LV37
OPEN
C

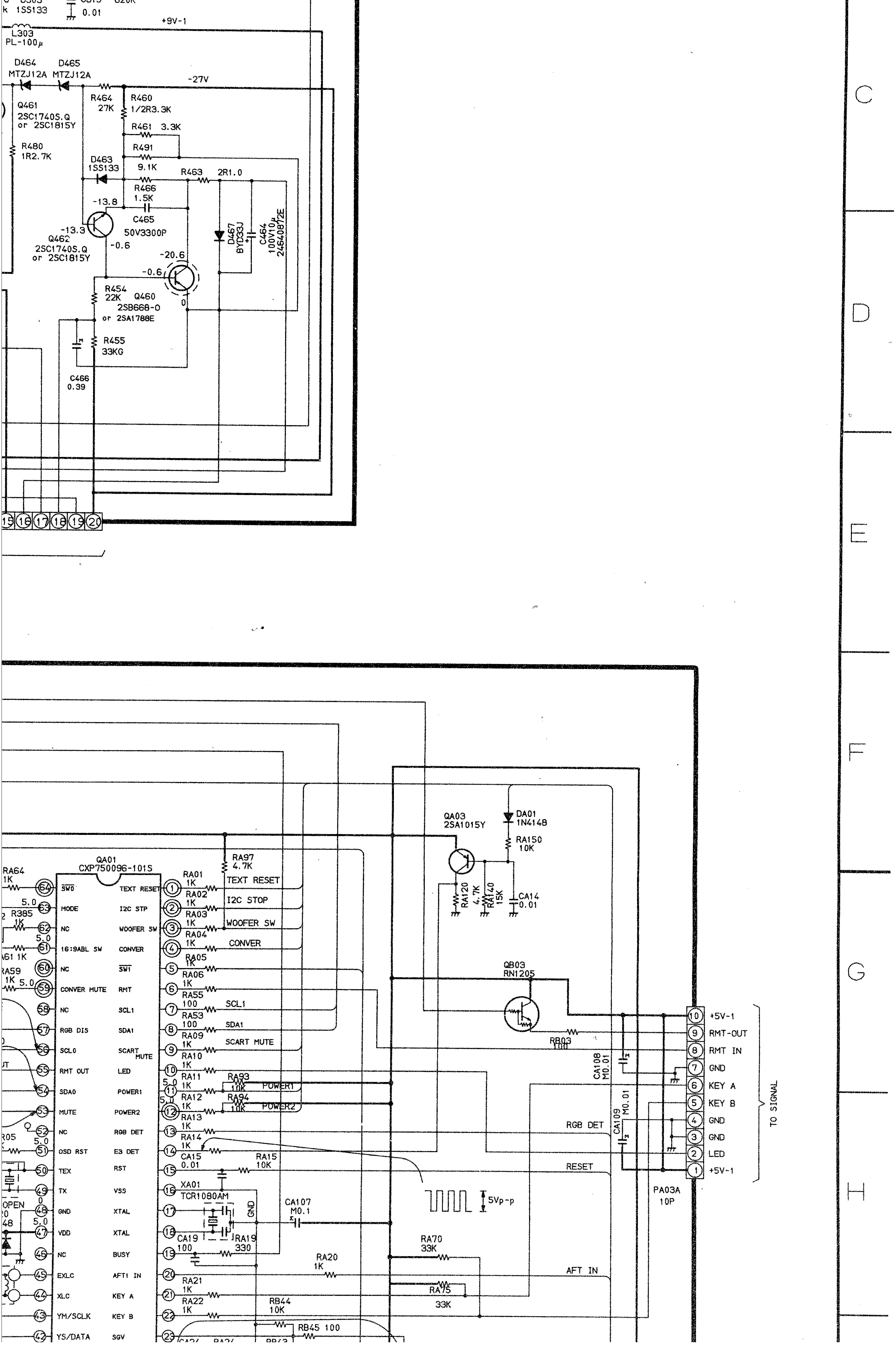

CZ07
0.1
RZ22
2.2K
RZ07
100
QZ02
2SC2712Y
RZ05
220
RZ04
1K
QZ03
2SA1162Y
RZ08
470
RZ20
100
RZ19
1K
RZ14
1K
CZ33
47P
CZ32
47P
QZ05
2SA1162Y
CZ31
0.1
RZ10
2.2K
RZ11
100
QZ08
2SC2712Y
RZ17
220
RZ13
1K
QZ06
2SA1162Y
RZ18
470
RZ09
100
RZ12
1K
RZ15
1K
CZ35
47P
CZ34
47P
QZ04
2SA1162Y
+5V-2
QZ01
TC90A49P
CZ29
0.01
CZ30
16V10μ
GND
YOUT
AVDD
LZ03 PL-10
BIAS1
BIAS
CZ17
0.01
CZ28 0.01
BIAS2
VRT
CZ26
0.01
CZ12 0.01
COUT
AIN
CZ36
OPEN
CZ03 0.47
CZ14
16V10μ
CZ13
0.01
AVSS
VRB
CZ05 0.01
LZ02
PL-10
AVDD
DVDD
GND
CZ20 0.01
RZ06 820
CZ24
0.01
CZ25
16V10μ
LZ04
PL-10
CZ16
OPEN
CZ19 180
FIL
DVSS
FSC
LZ08
CZ45 10
CZ23
0.01
CZ22
16V10μ
PL-39
CZ21 1200
CKIN
DVDD
RZ30
330
LZ05
PL-10
SDA
KHLLER
SDA
RZ03
3.3K
GJ63 OPEN
CZ10
10
RZ01
1K
GJ62
SHORT
CC47
SCL
TEST
RESET
SCL
GND-Y
YCOMB
LZ01
PL-22
GJ61
SHORT
CC47
RZ29
330
CZ09
22
CZ11
22
RZ02
1K
QZ07
2SA1162Y
CZ08 OPEN
RV8
OPE
GJ09
0 ohm
GJ08
0 ohm
LV04
OPEN
AV-V
GND(V1)
CV21
OPEN
CCOMB
SCL&SDA
EX
INT
RV29
27K
GND
GND
GND
QV01
TA1218N
RV28
68K
DV12
RV33
12K
I/O 3
O 4
+9V
RV36
100
LV09
PL-10
+9V
CV08
16V1000μ
SCART2 #8
DV11
HSM221C
RV08
1.6K
DV06
I/O 2
GND
GND
SCART1 #8
RV34
12K
DV07
I/O 1
SCL
RV09
100
SCL
QV02
2SC2712Y
DV10
HSM221C
RV07
1.6K
CV35
0.01
DV01
C S2
C S2
RV06 100
SDA
RV10 100
SDA
R S2
CS08
2.2μ
RS10
4.7K
R S2
SYNC OUT
SYNC-AV
RV20
100
DV02
RV35
10K
GV11
0 ohm
RV18
12K
CV11
330
S S2
GND
CV06
16V10μ
RV05
100
S S2
E3
ADRS
DV21
HSM221C
L S2
CS07
2.2μ
RS09
4.7K
L S2
V V2
RV21
150
GND
DV03
C S1
CV05
0.01
C S1
L V2
SGA
RV04 100
R S1
CS06
2.2μ
RS08 4.7K
R S1
Y IN
CV10
NP16V10μ
Y-COMB
DV04
GV13
680
S S1
GND
CV04
16V10μ
RV03 100
S S1
E2
R V2
GND-Y
L S1
CS05 2.2μ
RS07 4.7K
L S1
C IN
GV14
0 ohm
CV13
0.01
C COMB
DV05
V V1
CV03
16V10μ
V V1
VCC
CV12
0.1
GND
RV02 100
R V1
RS06
4.7K
CS04 2.2μ
R V1
E1
C OUT1
AV-C
L V1
CS03
2.2μ
RS05
4.7K
L V1
R OUT1
GV15
0 ohm
RS13
100 AV-R
TV-V
CV02
16V10μNP
RV01
100
V TV
Y OUT1
TV-R
CS02
NP2.2μ
RS04
100
R TV
TV
L OUT1
RS14 AV-L
RS35
22K
CS01
NP2.2μ
RS03
100
GV17
0 ohm
2.1
6.9
6.6
0.0
5.2
5.2
5.2
5.2
0.0
5.2
5.2
5.2
5.2
5.2
5.2
5.2
5.2
5.2
5.2
0.0
0.0
4.5
4.5
4.3
0.0
5.2
5.2
5.2
5.2
5.2
9.1
3.9
4.1
3.8
4.1
4.6


S601
EXT
INT
R672
1/6 1K
L672
TEM2131AM
GND
CC12
0.01
CC32
0.01
CC03
1000P
L673
TEM2131AM
P004
8PSPTERM
CC05
0.01
GND
CC06
0.01
L674
TEM2131AM
AR673
1/6 1K
R
L
SURRUND SP
CC04
1000P
R675
1/6 1K
GND
Q340
2SC1740S.Q
or 2SC1815Y
R347
180K
D340
1SS133
R391
GND
PL-10
.01
.01
.47
.01
CZ25
16V10μ
LZ04
PL-10
CZ22
16V10μ
LZ05
PL-10
LZ09
ZBF253D-00
+5V-2
RV88
OPEN
CV75
OPEN
RV99
OPEN
CV21
OPEN
QV21
OPEN
QV20
OPEN
RV83
OPEN
RV84
OPEN
SCL&SDA
MICRO BOARD
41 SW
42 C S2
43 GND(C-S2)
44 E3 DET
GJ01
SHORT
45 S S2
46 GND(S-S2)
LV01
OPEN
GJ02
SHORT
47 L S2
48 R S2
49 GND
PV12B
9P L
+9V
QV02
2SC2712Y
RV20
100
SGV
DV21
HSM221C
RV21
150
GND(SVG)
PV10B
20P B/B PLUG
1 A-MUTE
2 RGB-DIS
3 GND
4 AV-L
5 AV-R
6 AV-C
7 GND(C)
8 GND(SCART)
9 SCART-B
10 SCART-G
11 SCART-R
12 SCART-Ys
GJ21 SHORT
GJ22 SHORT
LV20
OPEN
RS35
22K
QS08
2SC3326B
CA68
16V10μ
+5V-2
DR01
1N4148
DR02
1N4148
DR03
1N4148
RR15
390
RR16
390
RR17
390
LR02
PL-1
CR18
M0.1
LR01
PL-1
CR10
16V47μ
CR11
M0.1
RR07

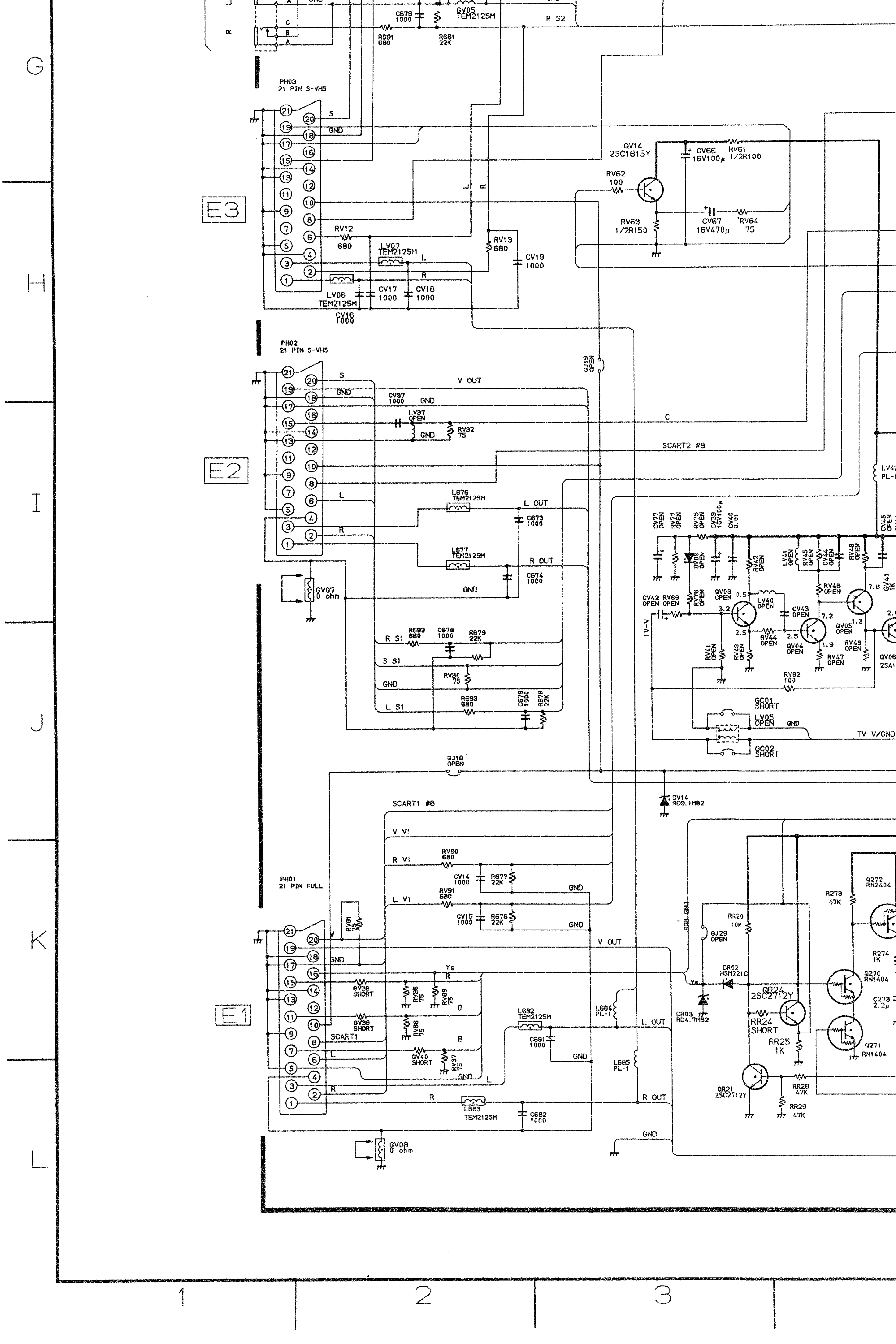

R347
180K
D340
R391 15K
1SS133
D341
UZ6.2BSB
6.8
6.2
6.1
Q341
2SA933S.Q
or 2SA1015Y
C340
16V10μ
R346
1K
D315
1SS133
R392
8.2K
0.22
CC32
0.01
R329
15K
C321
0.018
R320
100
R319 470
R318 470
RAMP
T.C.
Vin
GND
N.C.
SCL
SDA
EW
Vcc
EW-FB
GND
V-FB
N.C.
V.D
CC34
0.01
R330
1K
C319
1000P
R334
1K
R316
270k
D303
1SS133
C315
0.01
820K
L303
PL-100μ
+9V-1
C318
16V2200μ
D464
MTZJ12A
D465
MTZJ12A
-27V
Q461
2SC1740S.Q
or 2SC1815Y
R343
15K
R480
1R2.7K
C468
0.47
R465
110K
C469
KETSU
R341
4.7K
R464
27K
R460
1/2R3.3K
R461 3.3K
R491
9.1K
D463
1SS133
R463
2R1.0
R466
1.5K
C465
50V3300P
Q462
2SC1740S.Q
or 2SC1815Y
-13.8
-13.3
-0.6
-20.6
D467
BYD33J
C464
100V10μ
2464087E
R454
22K
Q460
2SB668-O
or 2SA1788E
R455
33KG
C466
0.39
R359
10K
D351
1SS133
R356
82K
D350
1SS133
+12V-2
R355
DEL.
C351
25V2200μ
R358
6.8K
Q354
2SA1020Y
Q352
RN1203
R353
1/2R100
D352
1SS133
CRT PROTECT
Q350
2SC1740S.Q
or 2SC1815Y
R352
100K
R351
82K
C352
16V2.2μ
C350
0.1
Q351
2SA933S.Q
or 2SA1015Y
R357
1.5K
R350
2.2K
V-STOP PROTECT
P350
TO DEF

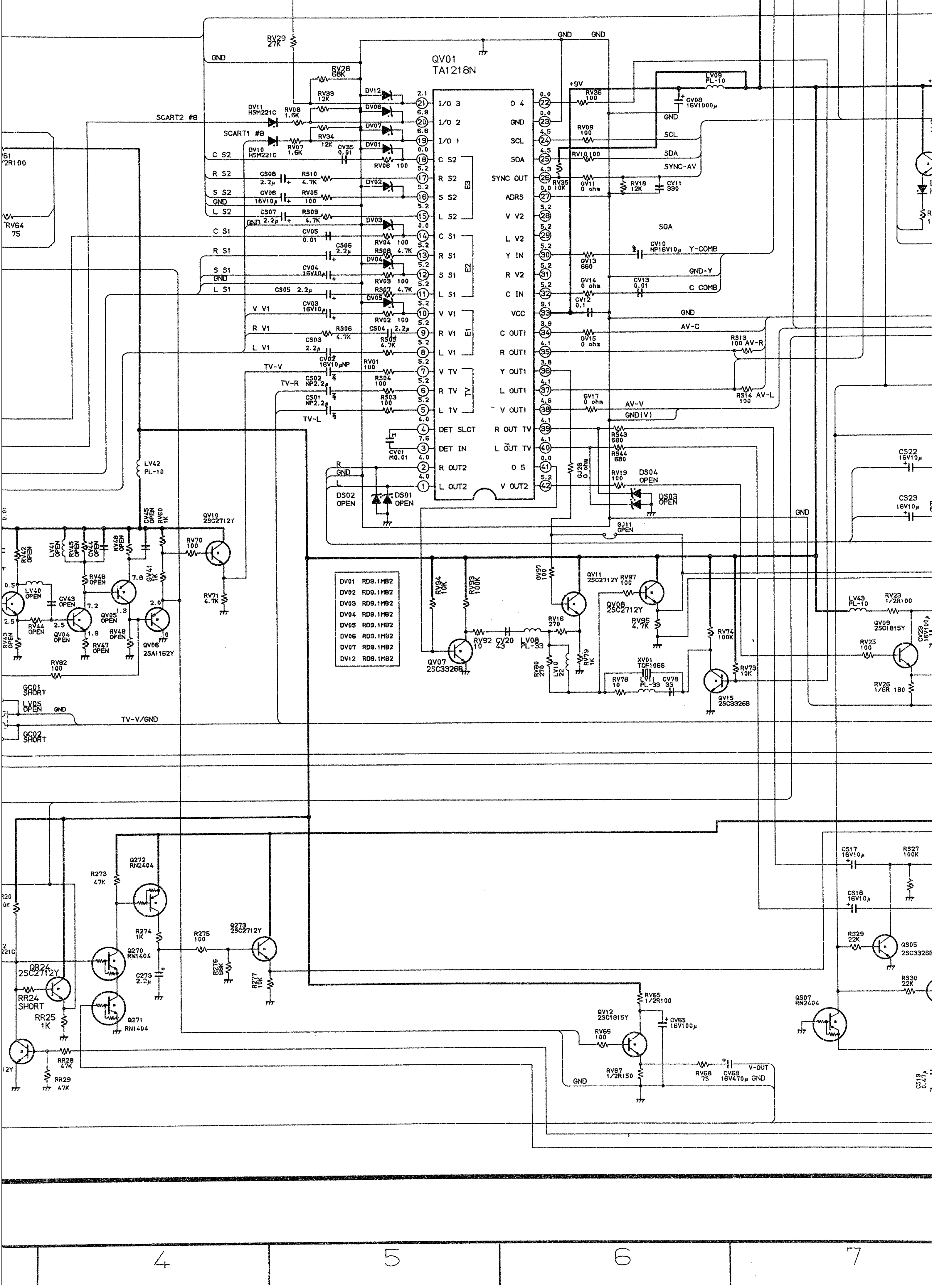
BOARD


+5V-1
RA71
10K
RA72
10K
DA46
1N4148
DA44
1N4148
CA69
0.01
CA68
16V10μ
DA45
1N4148
DA43
1N4148
QA02
MN24C16EN
VDD
WP
SCL
SDA
A0
A1
A2
GND
5Vp-p SCL
5Vp-p SDA
RA105
10K
RA104
6.8K
RA101
1K
RA64
1K
RA102
47K
R385
1K
RA61 1K
RA107
4.7K
RA59
1K
RA108
4.7K
RA96
10K
RA57 100
RMT OUT
RA07
1K
RA08
1K
MUTE
RR05
1K
RR06
22K
XA02 OPEN
LA01
PL-10
CA420
16V10μ
CA430
0.01
DA420
1N4148
LB01
TRF1177D
CA440
0.01
CA43
100
CA42
100
QA01
CXP750096-101S
SW0
MODE
NC
16:9ABL SW
NC
CONVER MUTE
NC
RGB DIS
SCL0
RMT OUT
SDA0
MUTE
NC
OSD RST
TEX
TX
GND
VDD
NC
EXLC
XLC
YM/SCLK
YS/DATA
TEXT RESET
I2C STP
WOOFER SW
CONVER
SW1
RMT
SCL1
SDA1
SCART MUTE
LED
POWER1
POWER2
RGB DET
E3 DET
RST
VSS
XTAL
XTAL
BUSY
AFT1 IN
KEY A
KEY B
SGV
RA97
4.7K
RA01 1K
RA02 1K
RA03 1K
RA04 1K
RA05 1K
RA06 1K
RA55 100
RA53 100
RA09 1K
RA10 1K
RA11 1K
RA12 1K
RA13 1K
RA14 1K
TEXT RESET
I2C STOP
WOOFER SW
CONVER
SCL1
SDA1
SCART MUTE
RA93 10K
RA94 10K
POWERT
POWER2
CA15
0.01
RA15
10K
XA01
TCR1080AM
CA19
100
RA19
330
RA21
1K
RA22
1K
RB44
10K
QR01
MB90096P-G-186-SH
CR19
M0.1
RR22
10K
LR02
PL-1
CR20
M0.1
RR31
330
RR32
330
RR33
330
RR34
1K
AV3V
AVCC
CS
SIM DATA
SCLK
TRE BUSY
VCC
V3V
BOUT
CPOUT
AVSS1
VCDIN
AVSS2
RESET
TEST
VSS
DOCK1
DOCK0
RR01
1K
RR02
100K
RR03
2.2K
CR01
1μ
RR04
100
CR02
0.01
CR09
M0.1
RR23
10K
CR10
16V47μ
CR11
M0.1
RR07
1.5K
RR13



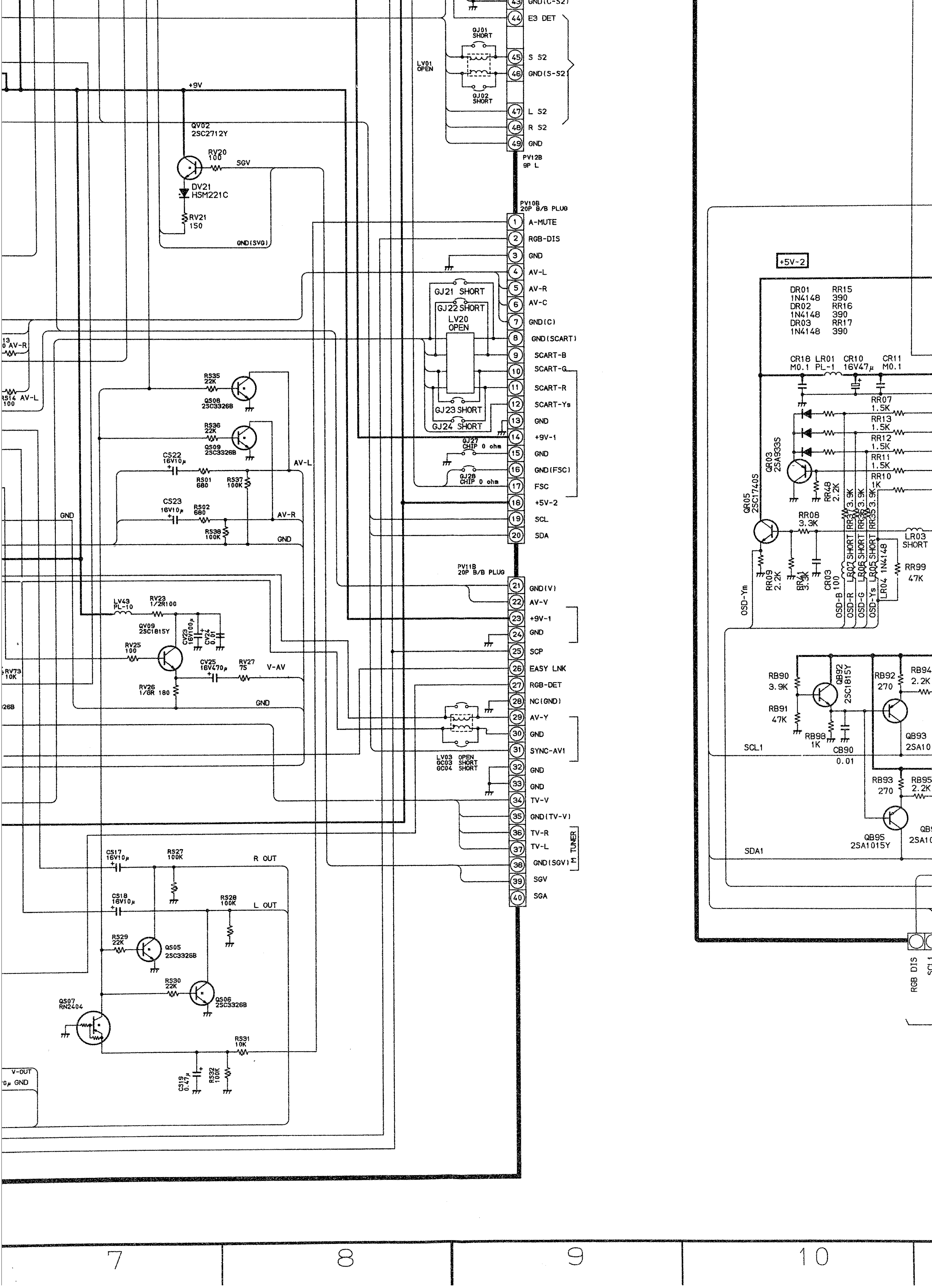
1SS133
0.01
+9V-1
L303
PL-100μ
D464
MTZJ12A
D465
MTZJ12A
-27V
Q461
2SC1740S.Q
or 2SC1815Y
R464
27K
R460
1/2R3.3K
R461 3.3K
R491
9.1K
R480
1R2.7K
D463
1SS133
R463
2R1.0
R466
1.5K
-13.8
C465
50V3300P
-13.3
Q462
2SC1740S.Q
or 2SC1815Y
-0.6
-20.6
-0.6
D467
BYD33J
C464
100V10μ
24640812E
R454
22K
Q460
2SB668-0
or 2SA1788E
0
R455
33KG
C466
0.39
15 16 17 18 19 20
C
D
E
F
G
H
QA03
2SA1015Y
DA01
1N4148
RA150
10K
RA120
4.7K
RA140
15K
CA14
0.01
RA97
4.7K
QA01
CXP750096-101S
RA64
1K
5.0
R385
1K
RA61 1K
RA59
1K 5.0
R305
5.0
OPEN
0
5.0
SW0
MODE
NC
16:9ABL SW
NC
CONVER MUTE
NC
RGB DIS
SCL0
RMT OUT
SDA0
MUTE
NC
OSD RST
TEX
TX
GND
VDD
NC
EXLC
XLC
YM/SCLK
YS/DATA
TEXT RESET
I2C STP
WOOFER SW
CONVER
SW1
RMT
SCL1
SDA1
SCART MUTE
LED
POWER1
POWER2
RGB DET
E3 DET
RST
VSS
XTAL
XTAL
BUSY
AFT1 IN
KEY A
KEY B
SGV
RA01
1K
RA02
1K
RA03
1K
RA04
1K
RA05
1K
RA06
1K
RA55
100
RA53
100
RA09
1K
RA10
1K
RA11
1K
RA12
1K
RA13
1K
RA14
1K
CA15
0.01
RA15
10K
XA01
TCR1080AM
CA19
100
RA19
330
RA21
1K
RA22
1K
RA93
10K
RA94
10K
TEXT RESET
I2C STOP
WOOFER SW
CONVER
SCL1
SDA1
SCART MUTE
POWER1
POWER2
RGB DET
RESET
AFT IN
CA107
M0.1
5Vp-p
RA70
33K
RA20
1K
RA75
33K
RB44
10K
RB45 100
QB03
RN1205
RB03
100
CA108
M0.01
CA109
M0.01
PA03A
10P
10 +5V-1
9 RMT-OUT
8 RMT IN
7 GND
6 KEY A
5 KEY B
4 GND
3 GND
2 LED
1 +5V-1
TO SIGNAL

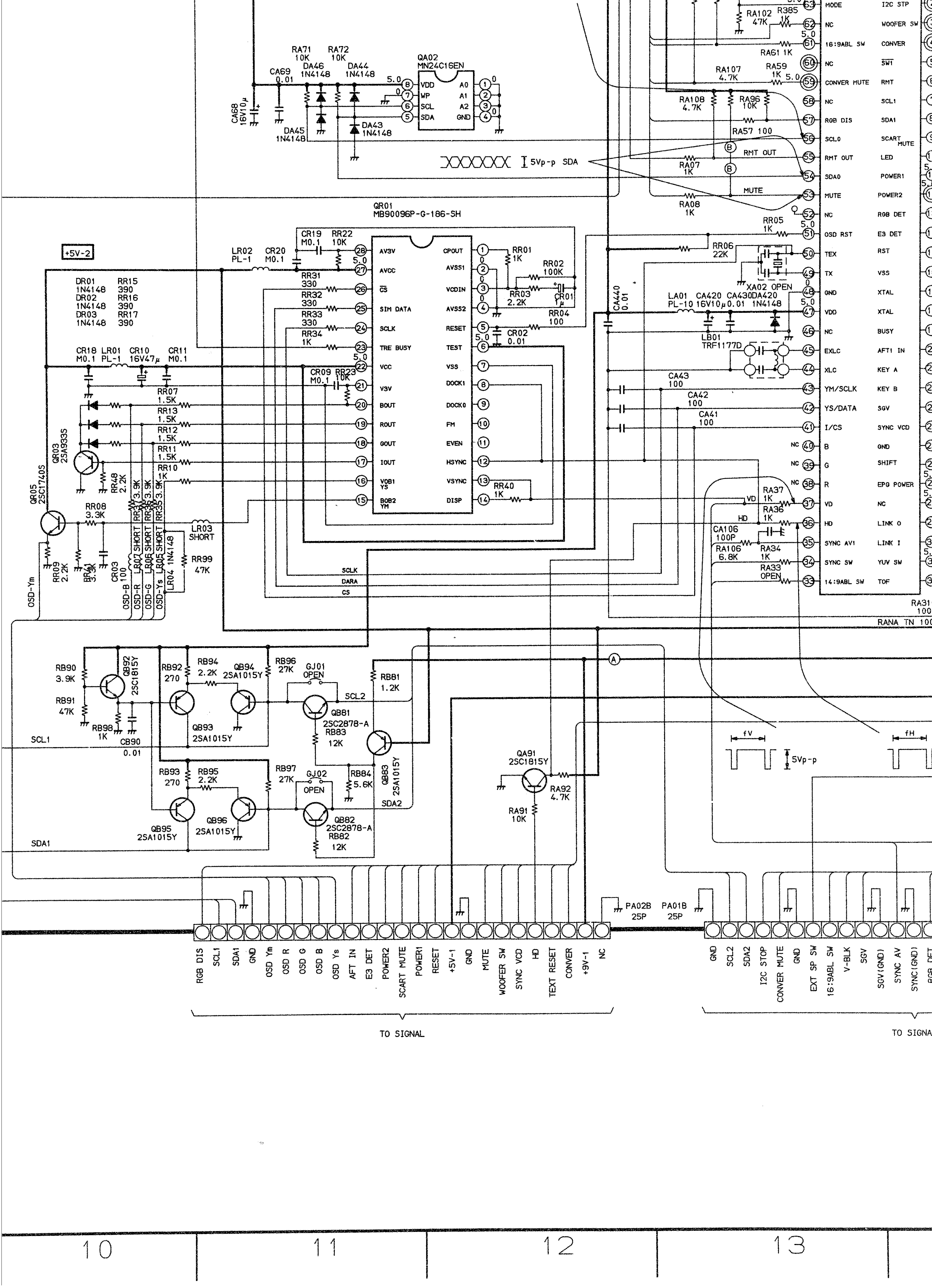

G
H
I
J
K
L
1
2
3
E3
E2
E1
PH03
21 PIN S-VHS
PH02
21 PIN S-VHS
PH01
21 PIN FULL
C676
1000
GV05
TEM2125M
R S2
R691
680
R681
22K
S
GND
L
R
QV14
2SC1815Y
CV66
16V100µ
RV61
1/2R100
RV62
100
RV63
1/2R150
CV67
16V470µ
RV64
75
RV12
680
LV07
TEM2125M
RV13
680
CV19
1000
LV06
TEM2125M
CV17
1000
CV18
1000
CV16
1000
GJ19
OPEN
V OUT
CV37
1000
LV37
OPEN
RV32
75
C
SCART2 #8
L676
TEM2125M
L OUT
C673
1000
L677
TEM2125M
R OUT
C674
1000
GV07
0 ohm
R S1
R692
680
C678
1000
R679
22K
S S1
RV30
75
L S1
R693
680
C679
1000
R678
22K
CV77
OPEN
RV77
OPEN
RV75
OPEN
CV39
16V100µ
CV40
0.01
DV15
OPEN
RV42
OPEN
LV41
OPEN
RV45
OPEN
CV44
OPEN
RV48
CV45
LV42
PL-1
CV42
OPEN
RV69
OPEN
RV76
OPEN
QV03
OPEN
LV40
OPEN
CV43
OPEN
RV46
OPEN
GV41
1K
TV-V
RV44
OPEN
QV04
OPEN
QV05
OPEN
RV47
OPEN
RV49
OPEN
QV06
2SA1
RV41
OPEN
RV43
OPEN
RV82
100
GC01
SHORT
LV05
OPEN
GC02
SHORT
TV-V/GND
GJ18
OPEN
DV14
RD9.1MB2
SCART1 #8
V V1
R V1
RV90
680
CV14
1000
R677
22K
L V1
RV91
680
CV15
1000
R676
22K
RV81
75
V
Ys
GV38
SHORT
RV85
75
RV89
75
GV39
SHORT
RV86
75
G
SCART1
B
GV40
SHORT
RV87
75
L682
TEM2125M
C681
1000
L683
TEM2125M
C682
1000
L684
PL-1
L685
PL-1
GV08
0 ohm
RGB GND
GJ29
OPEN
RR20
10K
DR02
HSM221C
DR03
RD4.7MB2
QR24
2SC2712Y
RR24
SHORT
RR25
1K
QR21
2SC2712Y
RR28
47K
RR29
47K
R273
47K
Q272
RN2404
R274
1K
Q270
RN1404
C273
2.2µ
Q271
RN1404

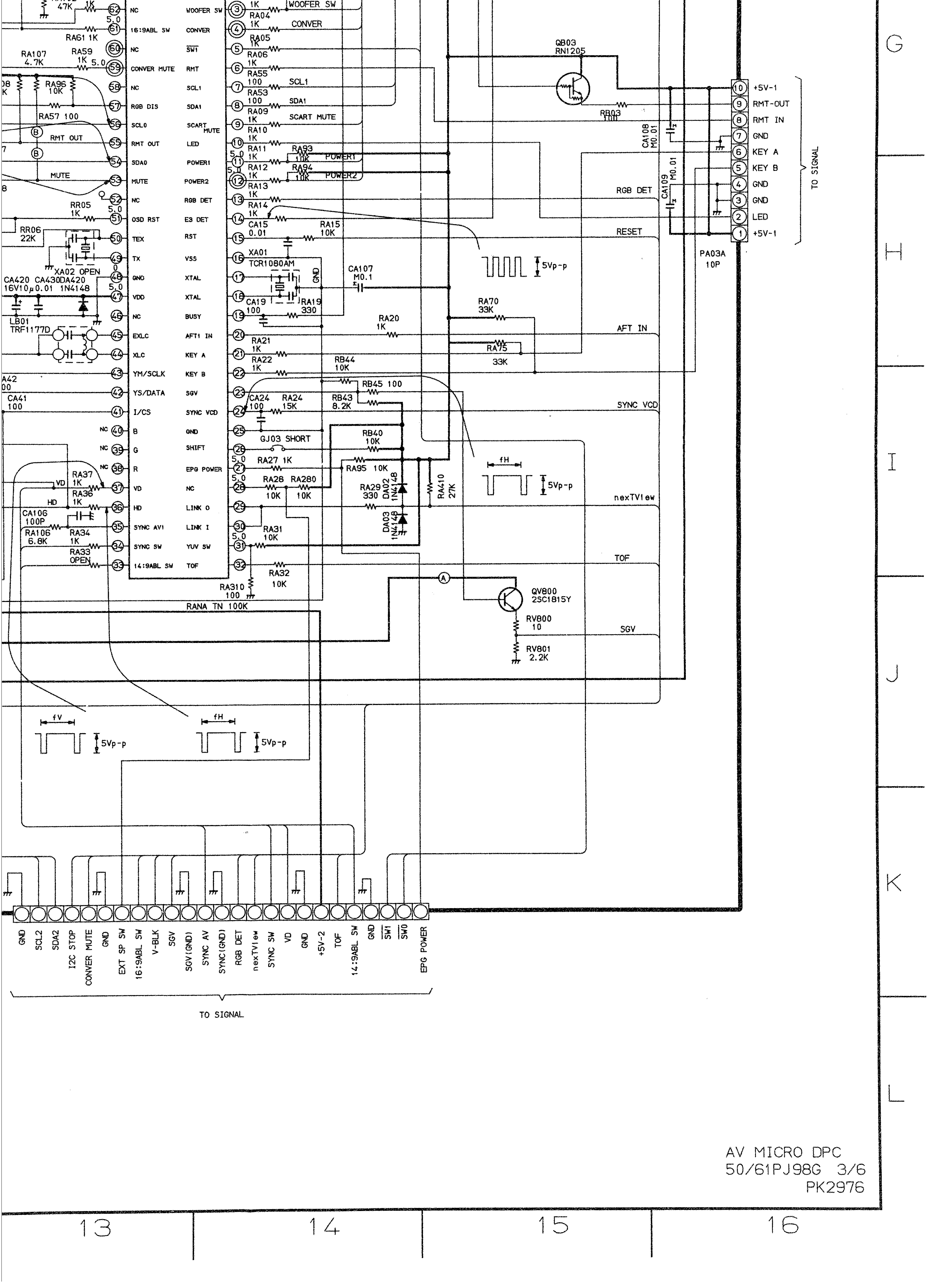


QV01
TA1218N
I/O 3
I/O 2
I/O 1
C S2
R S2
S S2
L S2
C S1
R S1
S S1
L S1
V V1
R V1
L V1
V TV
R TV
L TV
DET SLCT
DET IN
R OUT2
L OUT2
O 4
GND
SCL
SDA
SYNC OUT
ADRS
V V2
L V2
Y IN
R V2
C IN
VCC
C OUT1
R OUT1
Y OUT1
L OUT1
V OUT1
R OUT TV
L OUT TV
O 5
V OUT2
E3
E2
E1
TV
SCART2 #8
SCART1 #8
DV11 HSM221C
DV10 HSM221C
RV29 27K
RV28 68K
RV33 12K
RV34 12K
RV08 1.6K
RV07 1.6K
CV35 0.01
CS08 2.2μ
RS10 4.7K
CV06 16V10μ
RV05 100
CS07 2.2μ
RS09 4.7K
CV05 0.01
CS06 2.2μ
RS08 4.7K
CV04 16V10μ
RV03 100
CS05 2.2μ
RS07 4.7K
CV03 16V10μ
RV02 100
RS06 4.7K
CS04 2.2μ
CS03 2.2μ
RS05 4.7K
CV02 16V10μNP
RV01 100
CS02 NP2.2μ
RS04 100
CS01 NP2.2μ
RS03 100
CV01 M0.01
TV-V
TV-R
TV-L
+9V
RV36 100
LV09 PL-10
CV08 16V1000μ
RV09 100
RV10 100
RV35 10K
GV11 0 ohm
RV18 12K
CV11 330
SCL
SDA
SYNC-AV
SGA
CV10 NP16V10μ
Y-COMB
GV13 680
GND-Y
GV14 0 ohm
CV13 0.01
C COMB
CV12 0.1
AV-C
GV15 0 ohm
RS13 100 AV-R
RS14 100 AV-L
GV17 0 ohm
AV-V
GND(V)
RS43 680
RS44 680
GJ26 0 ohm
RV19 100
DS04 OPEN
DS03 OPEN
DS02 OPEN
DS01 OPEN
GJ11 OPEN
LV42 PL-10
CV45 OPEN
RV60 1K
QV10 2SC2712Y
RV70 100
RV71 4.7K
RV42 OPEN
LV41 OPEN
RV45 OPEN
CV44 OPEN
RV48 OPEN
RV46 OPEN
GV41 1K
LV40 OPEN
CV43 OPEN
QV05 OPEN
QV04 OPEN
RV44 OPEN
RV47 OPEN
RV49 OPEN
QV06 2SA1162Y
RV43 OPEN
RV82 100
GC01 SHORT
LV05 OPEN
GC02 SHORT
TV-V/GND
RV94 10K
RV93 100K
RV92 10
CV20 43
LV08 PL-33
QV07 2SC3326B
GV97 100
QV11 2SC2712Y
RV97 100
QV08 2SC2712Y
RV95 4.7K
RV16 270
RV80 270
LV10 22
RV79 1K
XV01 TCF1066
RV78 10
LV11 PL-33
CV78 33
RV74 100K
RV73 10K
QV15 2SC3326B
LV43 PL-10
RV23 1/2R100
QV09 2SC1815Y
CV23 16V100μ
RV25 100
RV26 1/6R 180
CS22 16V10μ
CS23 16V10μ
R273 47K
Q272 RN2404
R274 1K
Q270 RN1404
C273 2.2μ
Q271 RN1404
R275 100
R276 68K
Q273 2SC2712Y
R277 10K
QR24 2SC2712Y
RR24 SHORT
RR25 1K
RR28 47K
RR29 47K
RV61 2R100
RV64 75
RV65 1/2R100
QV12 2SC1815Y
CV65 16V100μ
RV66 100
RV67 1/2R150
RV68 75
CV68 16V470μ
V-OUT
GND
CS17 16V10μ
RS27 100K
CS18 16V10μ
RS29 22K
QS05 2SC3326B
RS30 22K
QS07 RN2404
CS19 0.47μ
4
5
6
7

DV01	RD9.1MB2
DV02	RD9.1MB2
DV03	RD9.1MB2
DV04	RD9.1MB2
DV05	RD9.1MB2
DV06	RD9.1MB2
DV07	RD9.1MB2
DV12	RD9.1MB2


GND(C-S2)
E3 DET
GJ01 SHORT
S S2
GND(S-S2)
GJ02 SHORT
L S2
R S2
GND
LV01 OPEN
PV12B 9P L
PV10B 20P B/B PLUG
+9V
QV02 2SC2712Y
RV20 100
SGV
DV21 HSM221C
RV21 150
GND(SVG)
A-MUTE
RGB-DIS
GND
AV-L
AV-R
AV-C
GND(C)
GND(SCART)
SCART-B
SCART-G
SCART-R
SCART-Ys
GND
+9V-1
GND
GND(FSC)
FSC
+5V-2
SCL
SDA
GJ21 SHORT
GJ22 SHORT
LV20 OPEN
GJ23 SHORT
GJ24 SHORT
GJ27 CHIP 0 ohm
GJ28 CHIP 0 ohm
RS35 22K
QS08 2SC3326B
RS36 22K
QS09 2SC3326B
CS22 16V10μ
RS01 680
RS37 100K
AV-L
CS23 16V10μ
RS02 680
RS38 100K
AV-R
GND
AV-R
AV-L
RS14 100
GND
PV11B 20P B/B PLUG
GND(V)
AV-V
+9V-1
GND
SCP
EASY LNK
RGB-DET
NC(GND)
AV-Y
GND
SYNC-AV1
GND
GND
TV-V
GND(TV-V)
TV-R
TV-L
GND(SGV)
SGV
SGA
M TUNER
LV43 PL-10
RV23 1/2R100
QV09 2SC1815Y
CV23 16V100μ
CV24 0.01
RV25 100
CV25 16V470μ
RV27 75
V-AV
RV26 1/6R 180
GND
RV73 10K
LV03 OPEN
GC03 SHORT
GC04 SHORT
CS17 16V10μ
RS27 100K
R OUT
CS18 16V10μ
RS28 100K
L OUT
RS29 22K
QS05 2SC3326B
RS30 22K
QS06 2SC3326B
QS07 RN2404
RS31 10K
CS19 0.47μ
RS32 100K
V-OUT
GND
+5V-2
DR01 1N4148
DR02 1N4148
DR03 1N4148
RR15 390
RR16 390
RR17 390
CR18 M0.1
LR01 PL-1
CR10 16V47μ
CR11 M0.1
RR07 1.5K
RR13 1.5K
RR12 1.5K
RR11 1.5K
RR10 1K
QR03 2SA933S
RR48 2.2K
QR05 2SC1740S
RR08 3.3K
RR37 3.9K
RR36 3.9K
RR35 3.9K
LR07 SHORT
LR06 SHORT
LR05 SHORT
LR03 SHORT
LR04 1N4148
RR99 47K
RR09 2.2K
RR41 3.3K
CR03 100
OSD-Ym
OSD-B
OSD-R
OSD-G
OSD-Ys
RB90 3.9K
RB91 47K
QB92 2SC1815Y
RB98 1K
CB90 0.01
RB92 270
RB94 2.2K
QB93 2SA10
SCL1
RB93 270
RB95 2.2K
QB95 2SA1015Y
SDA1
RGB DIS
7
8
9
10


QA02
MN24C16EN
VDD
WP
SCL
SDA
A0
A1
A2
GND
RA71 10K
RA72 10K
DA46 1N4148
DA44 1N4148
DA45 1N4148
DA43 1N4148
CA69 0.01
CA68 16V10μ
5Vp-p SDA
QR01
MB90096P-G-186-SH
AV3V
AVCC
CS
SIM DATA
SCLK
TRE BUSY
VCC
V3V
BOUT
ROUT
GOUT
IOUT
VOB1 YS
BOB2 YM
CPOUT
AVSS1
VCDIN
AVSS2
RESET
TEST
VSS
DOCK1
DOCK0
FM
EVEN
HSYNC
VSYNC
DISP
+5V-2
LR02 PL-1
CR20 M0.1
CR19 M0.1
RR22 10K
RR31 330
RR32 330
RR33 330
RR34 1K
RR01 1K
RR02 100K
RR03 2.2K
CR01 1μ
RR04 100
CR02 0.01
RR40 1K
CR09 M0.1
RR23 10K
DR01 1N4148
DR02 1N4148
DR03 1N4148
RR15 390
RR16 390
RR17 390
CR18 M0.1
LR01 PL-1
CR10 16V47μ
CR11 M0.1
RR07 1.5K
RR13 1.5K
RR12 1.5K
RR11 1.5K
RR10 1K
QR03 2SA933S
RR48 2.2K
QR05 2SC1740S
RR08 3.3K
RR09 2.2K
RR41 3.3K
CR03 100
LR03 SHORT
LR07 SHORT
LR06 SHORT
LR05 SHORT
LR04 1N4148
RR99 47K
OSD-Ym
OSD-B
OSD-R
OSD-G
OSD-Ys
SCLK
DARA
CS
MODE
NC
16:9ABL SW
CONVER MUTE
RGB DIS
SCL0
RMT OUT
SDA0
MUTE
OSD RST
TEX
TX
GND
VDD
EXLC
XLC
YM/SCLK
YS/DATA
I/CS
B
G
R
VD
HD
SYNC AV1
SYNC SW
14:9ABL SW
I2C STP
WOOFER SW
CONVER
SW1
RMT
SCL1
SDA1
SCART MUTE
LED
POWER1
POWER2
RGB DET
E3 DET
RST
VSS
XTAL
BUSY
AFT1 IN
KEY A
KEY B
SGV
SYNC VCD
SHIFT
EPG POWER
LINK O
LINK I
YUV SW
TOF
RA102 47K
R385 1K
RA61 1K
RA107 4.7K
RA59 1K
RA108 4.7K
RA96 10K
RA57 100
RA07 1K
RA08 1K
RMT OUT
RR05 1K
RR06 22K
XA02 OPEN
LA01 PL-10
CA420 16V10μ
CA430 0.01
DA420 1N4148
LB01 TRF1177D
CA440 0.01
CA43 100
CA42 100
CA41 100
RA37 1K
RA36 1K
CA106 100P
RA106 6.8K
RA34 1K
RA33 OPEN
RA31 100
RANA TN 100
RB90 3.9K
RB91 47K
QB92 2SC1815Y
RB98 1K
CB90 0.01
RB92 270
RB94 2.2K
QB94 2SA1015Y
QB93 2SA1015Y
RB96 27K
GJ01 OPEN
SCL2
RB81 1.2K
QB81 2SC2878-A
RB83 12K
QB83 2SA1015Y
RB84 5.6K
RB93 270
RB95 2.2K
RB97 27K
GJ02 OPEN
QB95 2SA1015Y
QB96 2SA1015Y
QB82 2SC2878-A
RB82 12K
SDA2
SCL1
SDA1
QA91 2SC1815Y
RA92 4.7K
RA91 10K
fV
fH
5Vp-p
PA02B 25P
PA01B 25P
RGB DIS
SCL1
SDA1
GND
OSD Ym
OSD R
OSD G
OSD B
OSD Ys
AFT IN
E3 DET
POWER2
SCART MUTE
POWER1
RESET
+5V-1
GND
MUTE
WOOFER SW
SYNC VCD
HD
TEXT RESET
CONVER
+9V-1
NC
TO SIGNAL
GND
SCL2
SDA2
I2C STOP
CONVER MUTE
GND
EXT SP SW
16:9ABL SW
V-BLK
SGV
SGV(GND)
SYNC AV
SYNC(GND)
TO SIGNA
10
11
12
13


G
H
I
J
K
L
13
14
15
16
RA61 1K
RA107 4.7K
RA59 1K
RA96 10K
RA57 100
RMT OUT
MUTE
RR05 1K
RR06 22K
XA02 OPEN
CA420 16V10μ
CA430 0.01
DA420 1N4148
LB01 TRF1177D
CA41 100
RA37 1K
RA36 1K
VD
HD
CA106 100P
RA106 6.8K
RA34 1K
RA33 OPEN
NC
16:9ABL SW
CONVER MUTE
SCL0
RMT OUT
SDA0
MUTE
OSD RST
TEX
TX
GND
VDD
EXLC
XLC
YM/SCLK
YS/DATA
I/CS
B
G
R
VD
HD
SYNC AV1
SYNC SW
14:9ABL SW
WOOFER SW
CONVER
SW1
RMT
SCL1
SDA1
SCART MUTE
LED
POWER1
POWER2
RGB DET
E3 DET
RST
VSS
XTAL
BUSY
AFT1 IN
KEY A
KEY B
SGV
SYNC VCD
SHIFT
EPG POWER
LINK 0
LINK I
YUV SW
TOF
RA04 1K
RA05 1K
RA06 1K
RA55 100
RA53 100
RA09 1K
RA10 1K
RA11 1K
RA12 1K
RA13 1K
RA14 1K
RA93 10K
RA94 10K
CA15 0.01
RA15 10K
XA01 TCR1080AM
CA19 100
RA19 330
CA107 M0.1
RA20 1K
RA21 1K
RA22 1K
RB44 10K
RB45 100
RB43 8.2K
CA24 100
RA24 15K
GJ03 SHORT
RB40 10K
RA27 1K
RA95 10K
RA28 10K
RA280 10K
RA29 330
DA02 1N4148
DA03 1N4148
RA410 27K
RA31 10K
RA32 10K
RA310 100
RANA TN 100K
RA70 33K
RA75 33K
QB03 RN1205
RB03 100
CA108 M0.01
CA109 M0.01
PA03A 10P
+5V-1
RMT-OUT
RMT IN
GND
KEY A
KEY B
LED
TO SIGNAL
RGB DET
RESET
AFT IN
SYNC VCD
nexTView
TOF
SGV
QV800 2SC1815Y
RV800 10
RV801 2.2K
5Vp-p
fH
fV
5.0
GND
SCL2
SDA2
I2C STOP
CONVER MUTE
EXT SP SW
16:9ABL SW
V-BLK
SGV(GND)
SYNC AV
SYNC(GND)
nexTView
SYNC SW
+5V-2
14:9ABL SW
SW1
SW0
EPG POWER
TO SIGNAL

AV MICRO DPC
50/61PJ98G 3/6
PK2976

SCHEMATIC DIAGRAM MODEL : 50PJ98B / 50PJ98G (4/6)

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 3. Do not degrade the safety of the receiver through improper servicing.

030-9915

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position. Set other controls for best picture.

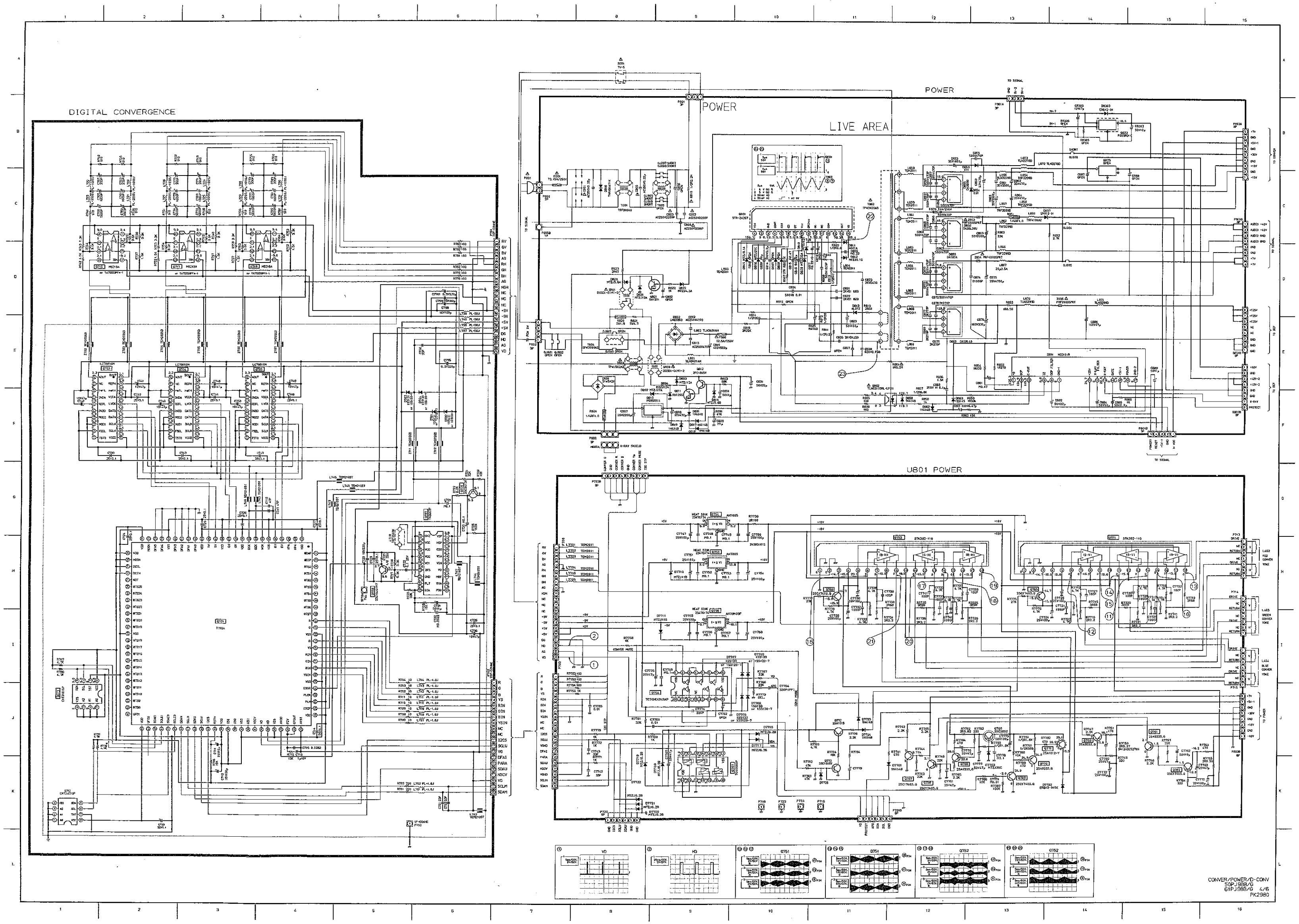
NOTES:

1. D.C. resistance value of a principal transformer is shown in this schematic diagram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ● : Solder links.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

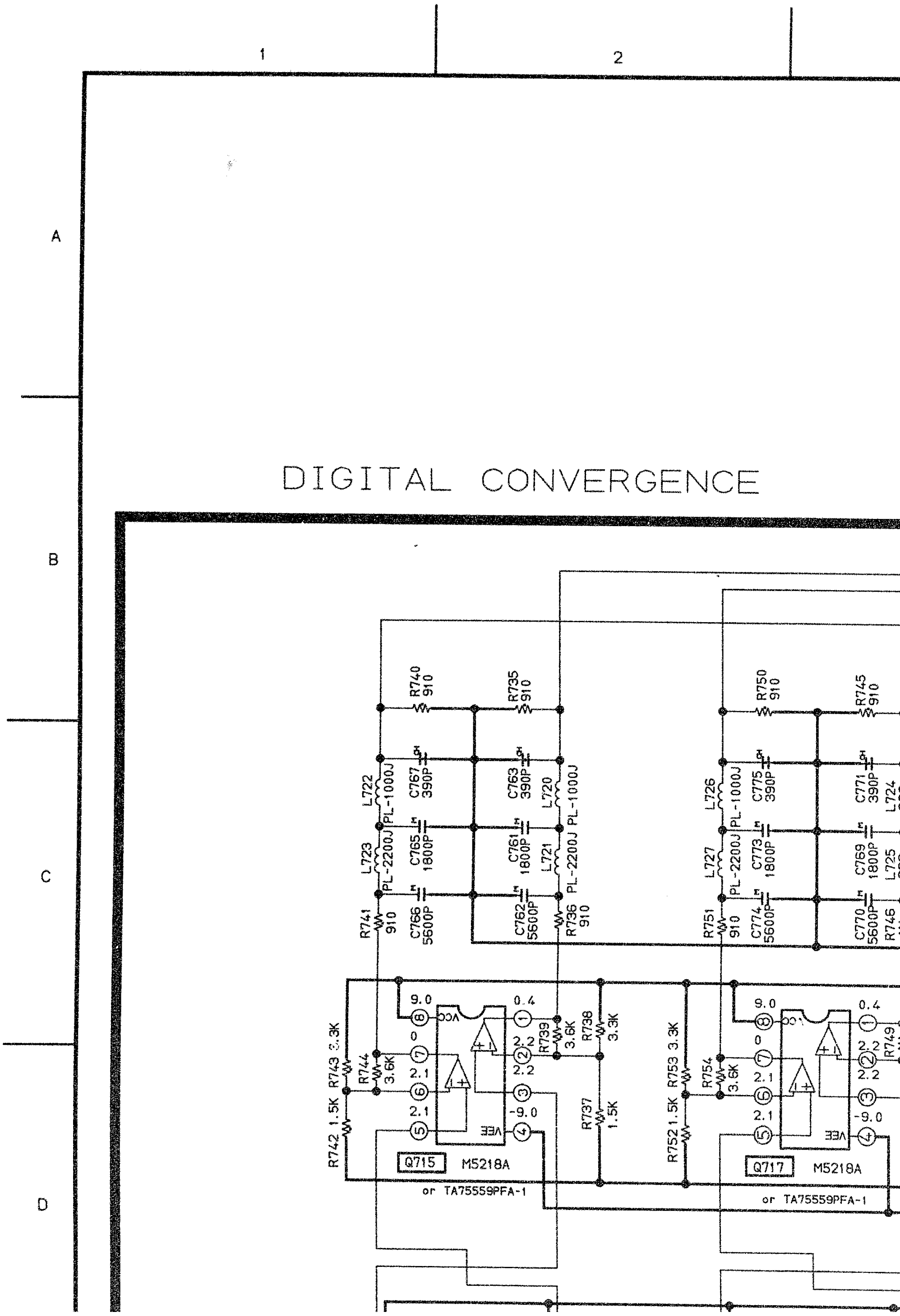
1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH, and the values less than 1 in H.



SCHEMATIC DIAGRAM MODEL : 50PJ98B / 50PJ98

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate ponents which have special characteristics important for safety and should be replaced only with types those in the original circuit or specified in the parts list. The mounting position of replacements is to be i with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTI 3. Do not degrade the safety of the receiver through improper servicing.

030-9915

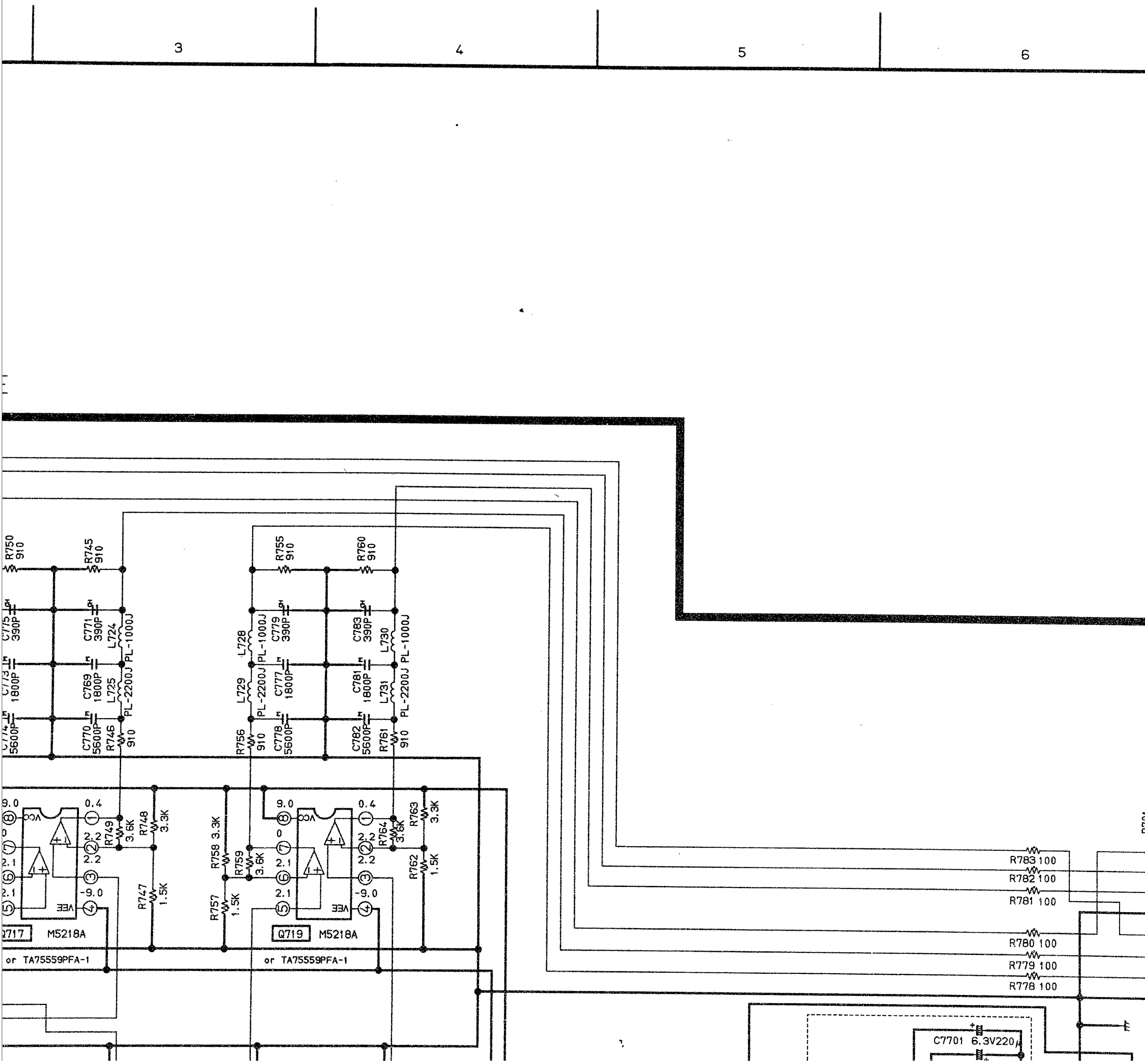

1
2
A
B
C
D
DIGITAL CONVERGENCE
R740 910
R735 910
R750 910
R745 910
L722 PL-1000J
C767 390P
C763 390P
L720 PL-1000J
L723 PL-2200J
C765 1800P
C761 1800P
L721 PL-2200J
R741 910
C766 5600P
C762 5600P
R736 910
L726 PL-1000J
C775 390P
C771 390P
L724
L727 PL-2200J
C773 1800P
C769 1800P
L725
R751 910
C774 5600P
C770 5600P
R746
9.0
0.4
0
2.2
2.1
2.2
2.1
-9.0
VCC
VEE
R743 3.3K
R744 3.6K
R742 1.5K
R739 3.6K
R738 3.3K
R737 1.5K
Q715 M5218A
or TA75559PFA-1
R753 3.3K
R754 3.6K
R752 1.5K
R749
Q717 M5218A
or TA75559PFA-1

PJ98G (4/6)

t designate com-
with types identical to
ts is to be identical
ETY NOTICE on page

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line vo
   volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capac
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid pos
   BRIGHTNESS control is almost in maximum position. Set other contro
   picture.


3
4
5
6
R750 910
R745 910
R755 910
R760 910
C775 390P
C771 390P
L724 PL-1000J
L728 PL-1000J
C779 390P
C783 390P
L730 PL-1000J
C773 1800P
C769 1800P
L725 PL-2200J
L729 PL-2200J
C777 1800P
C781 1800P
L731 PL-2200J
C774 5600P
C770 5600P
R746 910
R756 910
C778 5600P
C782 5600P
R761 910
9.0
0.4
VCC
R749 3.6K
R748 3.3K
2.2
2.1
-9.0
VEE
R747 1.5K
Q717 M5218A
or TA75559PFA-1
R758 3.3K
R759 3.6K
R757 1.5K
Q719 M5218A
or TA75559PFA-1
R764 3.6K
R763 3.3K
R762 1.5K
R783 100
R782 100
R781 100
R780 100
R779 100
R778 100
C7701 6.3V220

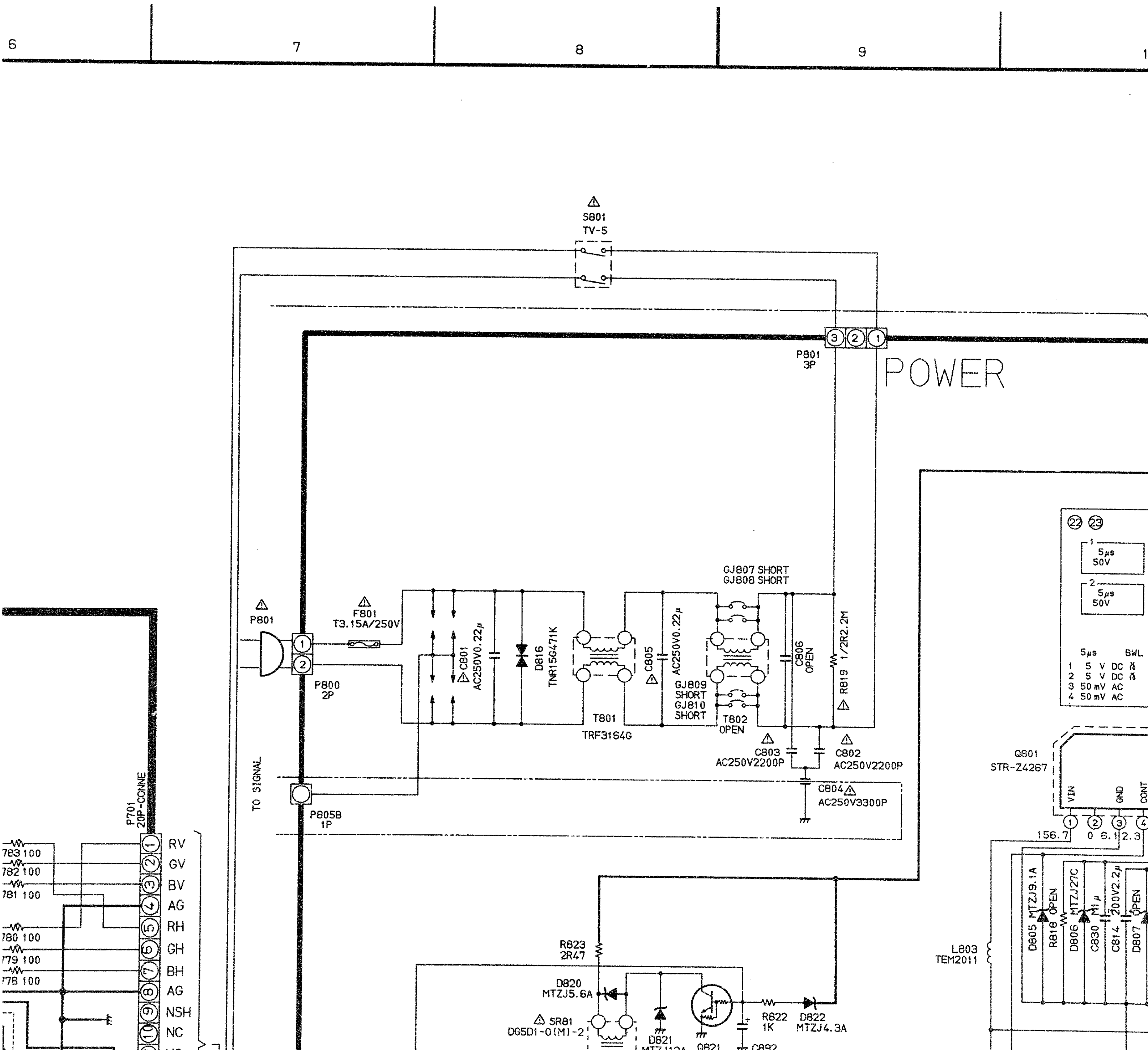
ound, line voltage 220
.

d a low capacity probe.

in mid position and
other controls for best

NOTES:

1. D.C. resistance value of a principal transformer is shown i
   gram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.



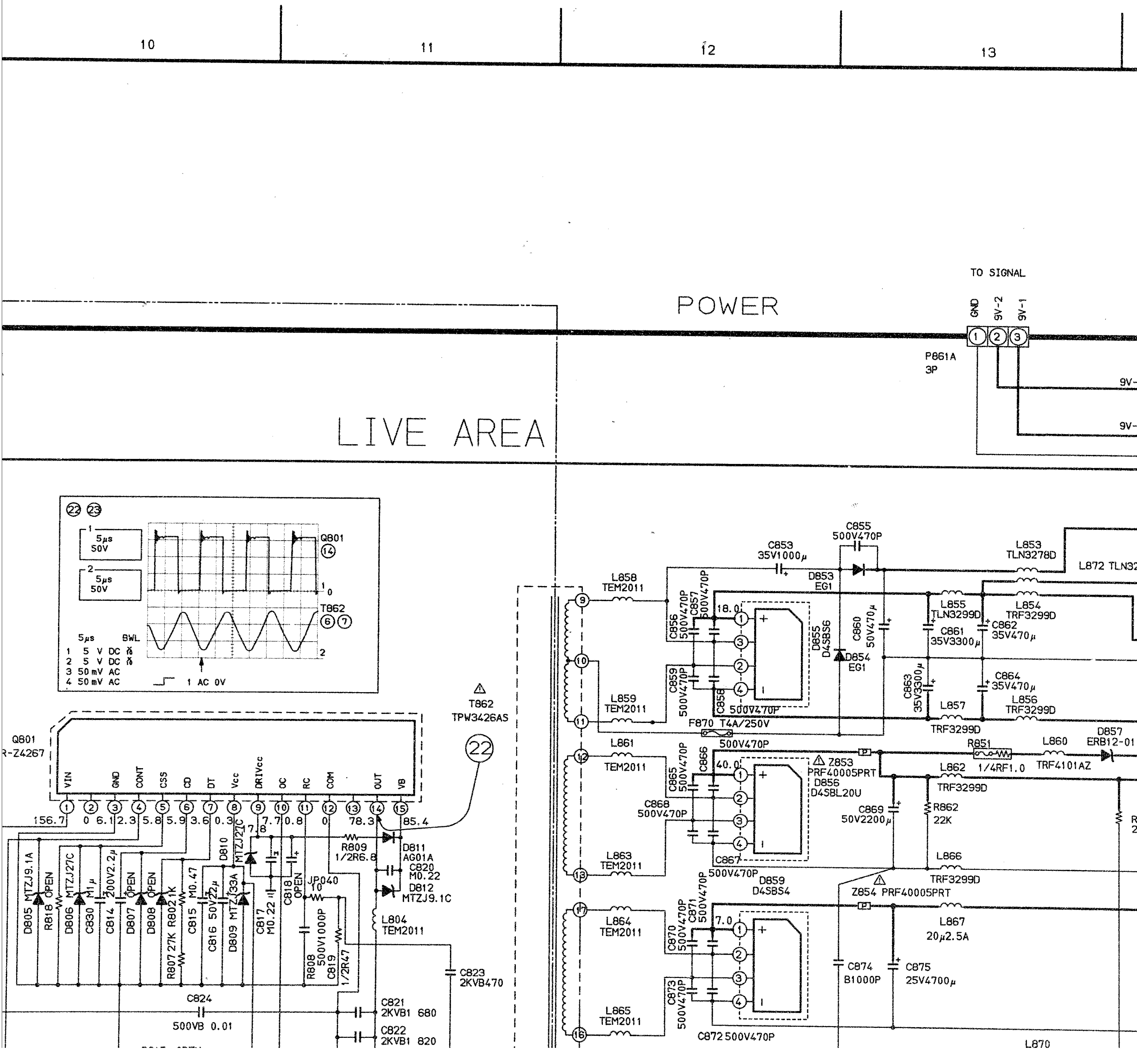
6
7
8
9
1
S801
TV-5
P801
3P
POWER
P801
F801
T3.15A/250V
P800
2P
C801
AC250V0.22μ
D816
TNR15G471K
T801
TRF3164G
C805
AC250V0.22μ
GJ807 SHORT
GJ808 SHORT
GJ809 SHORT
GJ810 SHORT
T802 OPEN
C806 OPEN
R819 1/2R2.2M
C803
AC250V2200P
C802
AC250V2200P
C804
AC250V3300P
TO SIGNAL
P805B
1P
P701
20P-CONNE
RV
GV
BV
AG
RH
GH
BH
AG
NSH
NC
783 100
782 100
781 100
780 100
779 100
778 100
R823
2R47
D820
MTZJ5.6A
SR81
DG5D1-0(M)-2
D821
Q821
R822
1K
D822
MTZJ4.3A
C892
Q801
STR-Z4267
VIN
GND
CONT
156.7
0
6.1
2.3
L803
TEM2011
D805 MTZJ9.1A
R818 OPEN
D806 MTZJ27C
C830 1μ
C814 200V2.2μ
D807 OPEN
5μs 50V
5μs 50V
5μs BWL
1 5 V DC
2 5 V DC
3 50 mV AC
4 50 mV AC

er is shown in this schematic dia-
the circuit.
ce.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUC

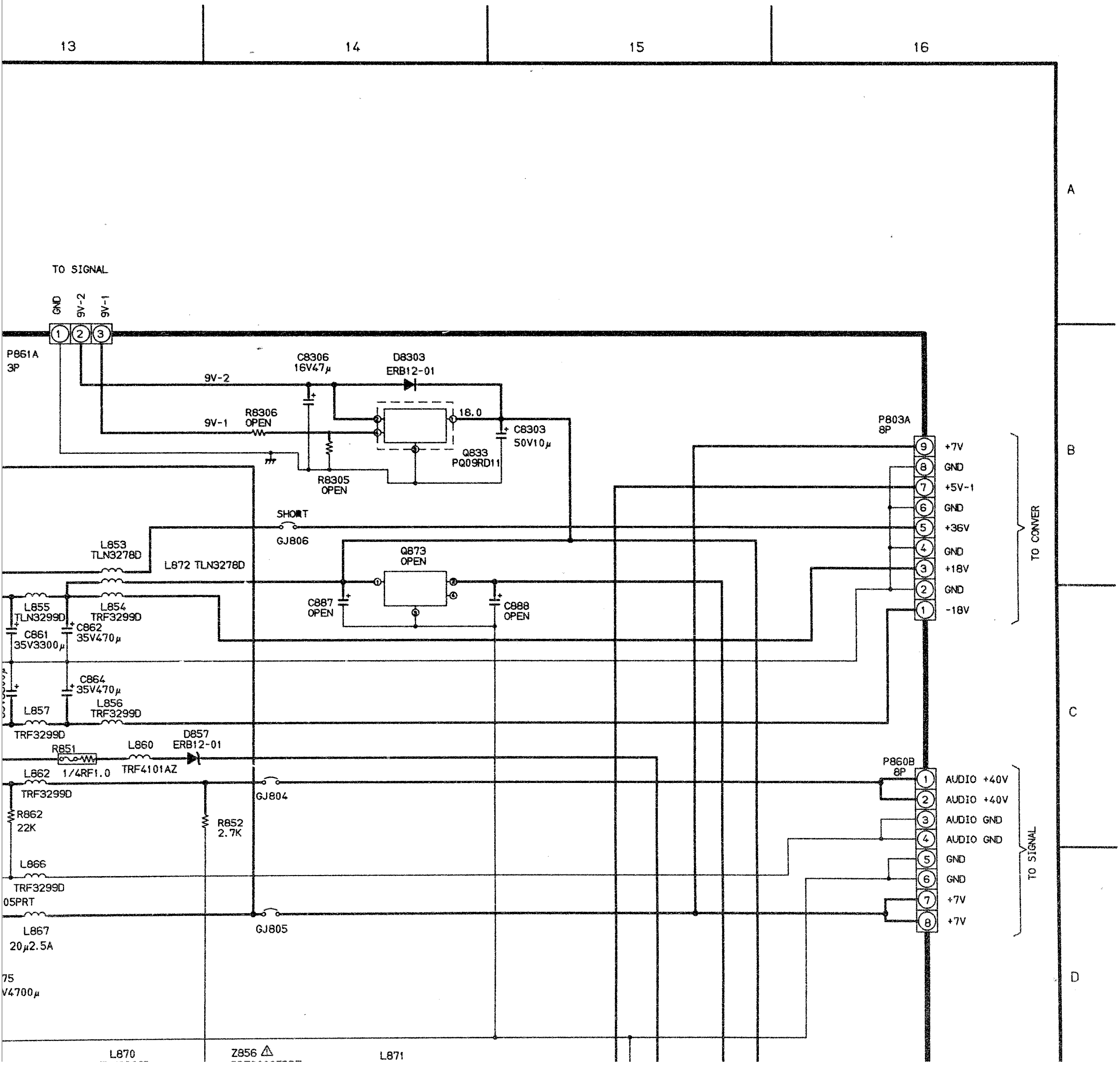
1. Resistance is shown in ohm, k=1,000, M=1,000,00
2. Unless other wise noted in schematic, all capacit sed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor sed in μH, and the values less than 1 in H.

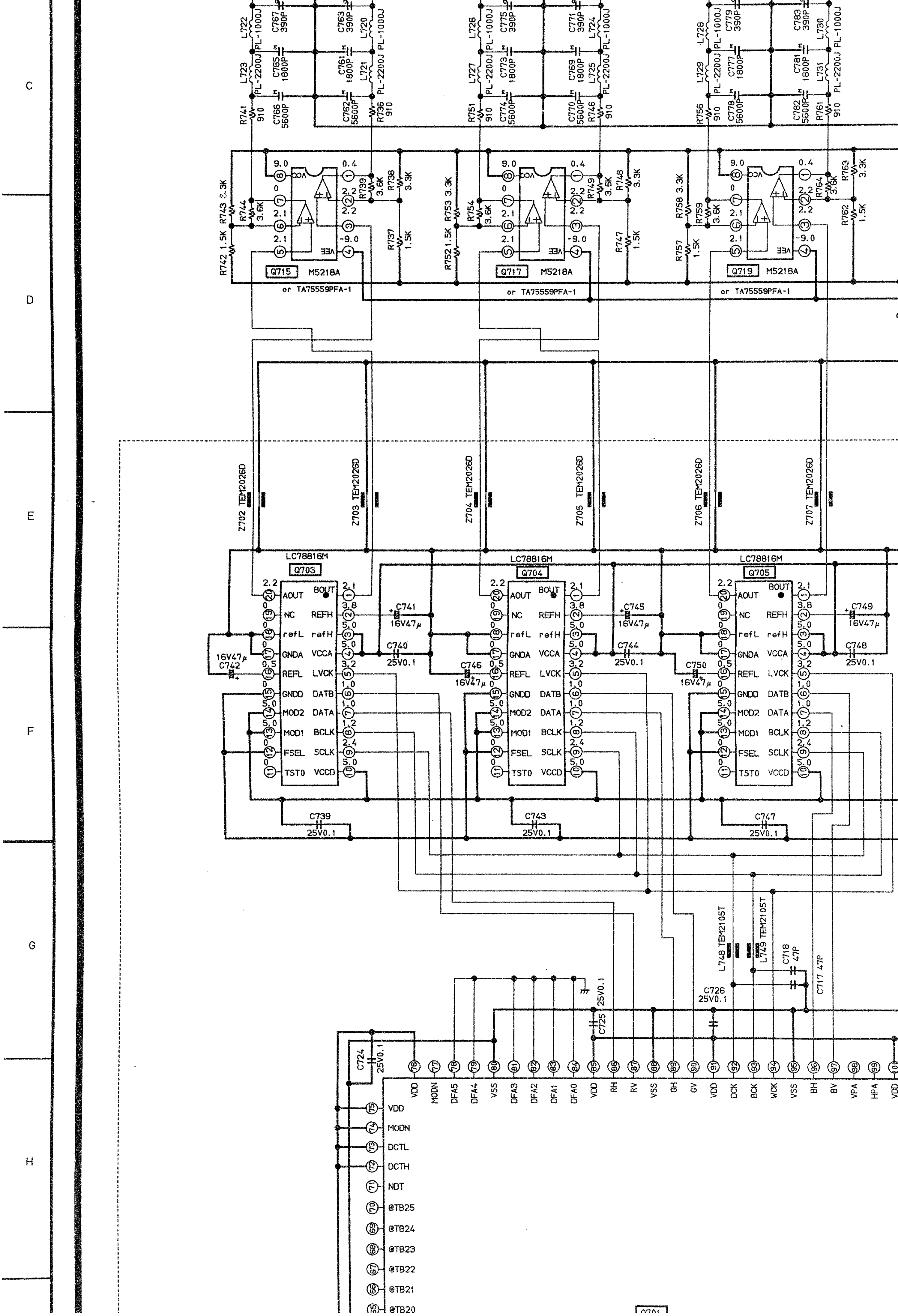


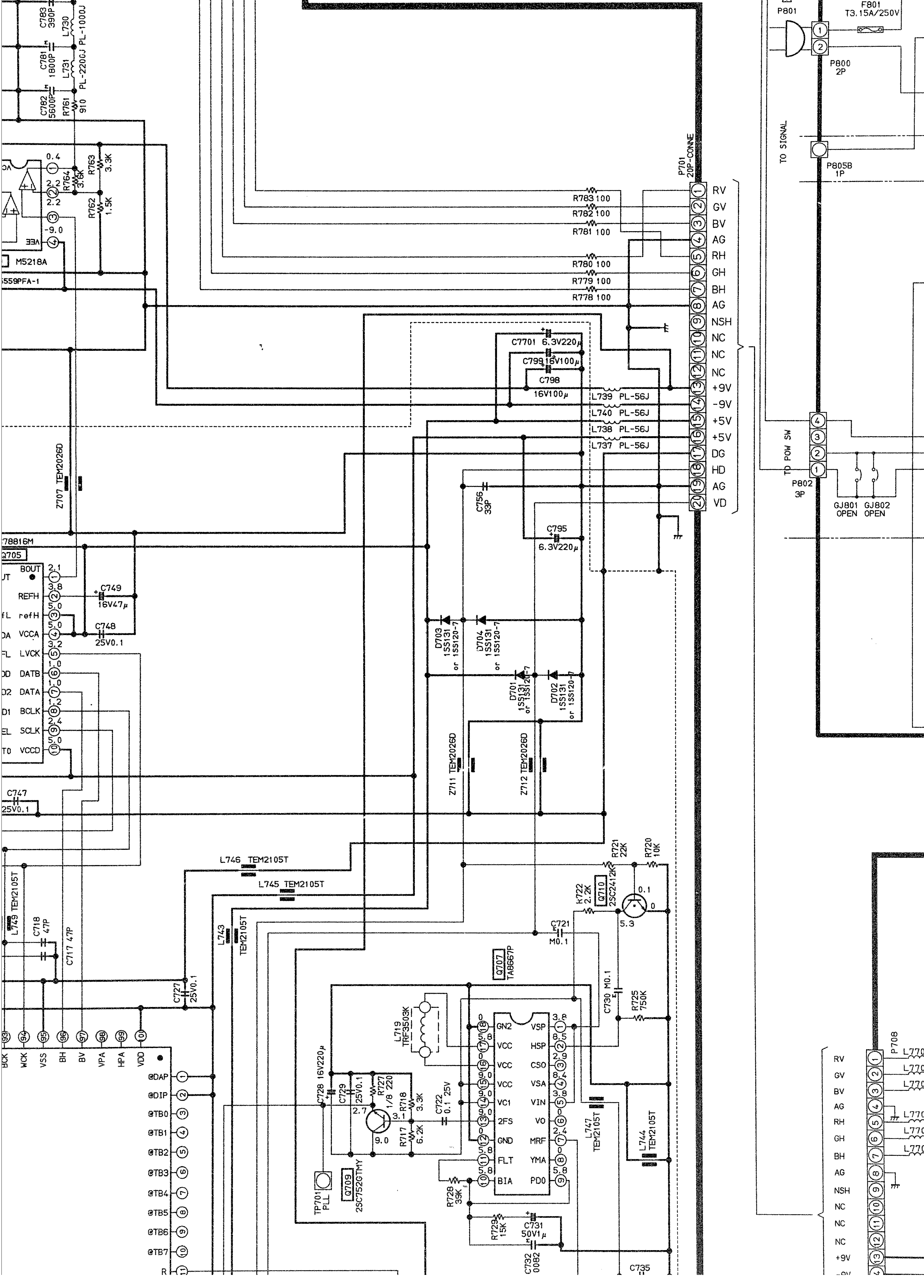
10
11
12
13
POWER
LIVE AREA
TO SIGNAL
GND
9V-2
9V-1
P861A
3P
9V-
9V-
㉒ ㉓
5μs 50V
5μs 50V
Q801 ⑭
T862 ⑥⑦
5μs BWL
1 5 V DC
2 5 V DC
3 50 mV AC
4 50 mV AC
1 AC 0V
T862
TPW3426AS
㉒
Q801
R-Z4267
VIN
GND
CONT
CSS
CD
DT
Vcc
DRIVcc
OC
RC
COM
OUT
VB
156.7
0
6.1
2.3
5.8
5.9
3.6
0.3
7.8
7.7
0.8
0
78.3
85.4
D805 MTZJ9.1A
R818 OPEN
D806 MTZJ27C
C830 1μ
C814 200V2.2μ
D807 OPEN
D808 OPEN
R802 1K
R807 27K
C815 M0.47
C816 50V22μ
D809 MTZJ33A
D810 MTZJ27C
C817 M0.22
C818 OPEN
JP040
10
R808 500V1000P
C819 1/2R47
R809 1/2R6.8
D811 AG01A
C820 M0.22
D812 MTZJ9.1C
L804 TEM2011
C823 2KVB470
C821 2KVB1 680
C822 2KVB1 820
C824 500VB 0.01
C853 35V1000μ
C855 500V470P
D853 EG1
L858 TEM2011
C856 500V470P
C857 500V470P
18.0
D855 D4SBS6
C860 50V470μ
D854 EG1
C859 500V470P
C858 500V470P
L859 TEM2011
F870 T4A/250V
L853 TLN3278D
L872 TLN3
L855 TLN3299D
L854 TRF3299D
C861 35V3300μ
C862 35V470μ
C863 35V3300μ
C864 35V470μ
L857 TRF3299D
L856 TRF3299D
L861 TEM2011
C865 500V470P
C866
40.0
500V470P
Z853 PRF40005PRT
D856 D4SBL20U
C868 500V470P
R851 1/4RF1.0
L860 TRF4101AZ
D857 ERB12-01
L862 TRF3299D
C869 50V2200μ
R862 22K
L863 TEM2011
C867 500V470P
D859 D4SBS4
L866 TRF3299D
Z854 PRF40005PRT
L864 TEM2011
C870 500V470P
C871 500V470P
7.0
L867 20μ2.5A
C874 B1000P
C875 25V4700μ
L865 TEM2011
C873 500V470P
C872 500V470P
L870

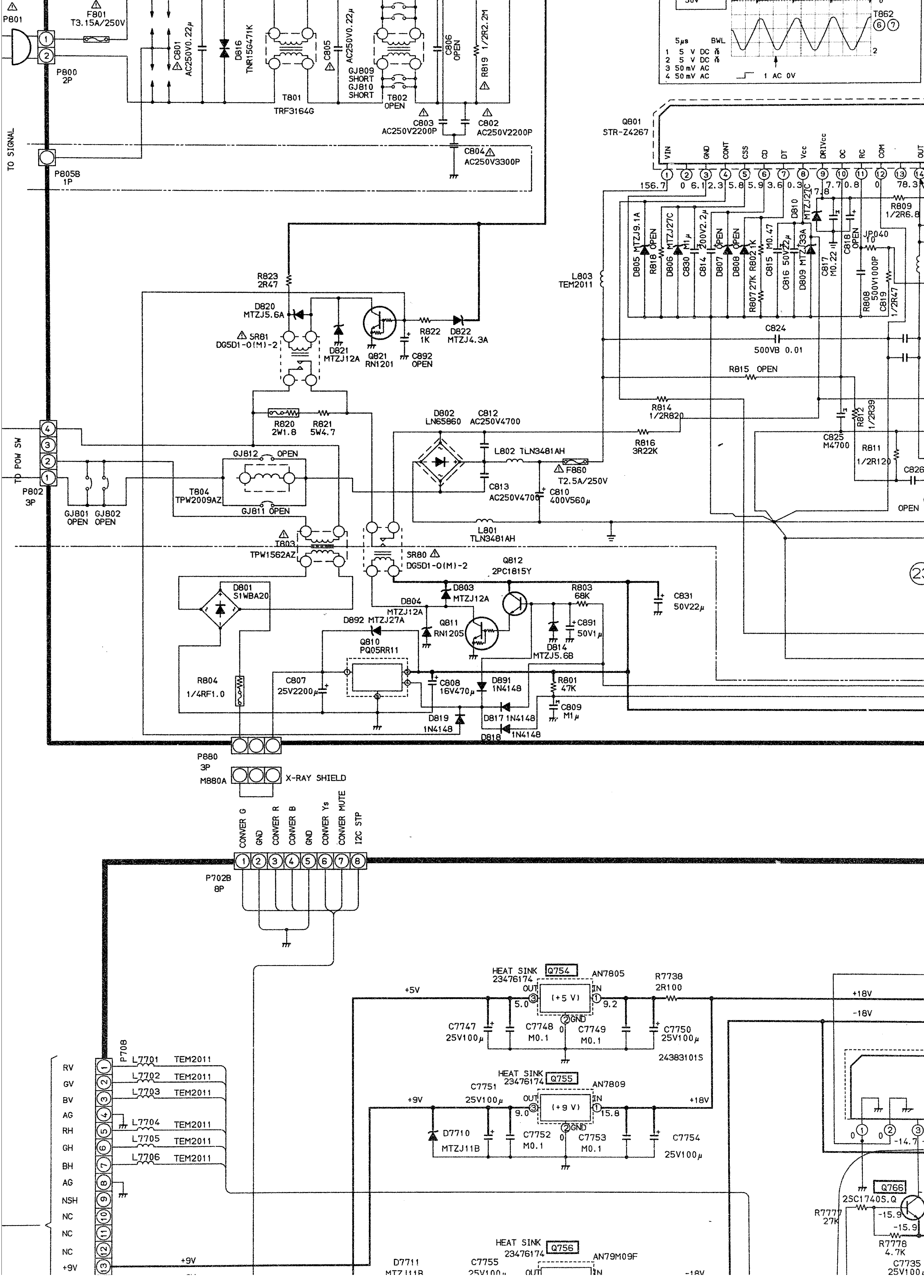
CITOR and INDUCTOR

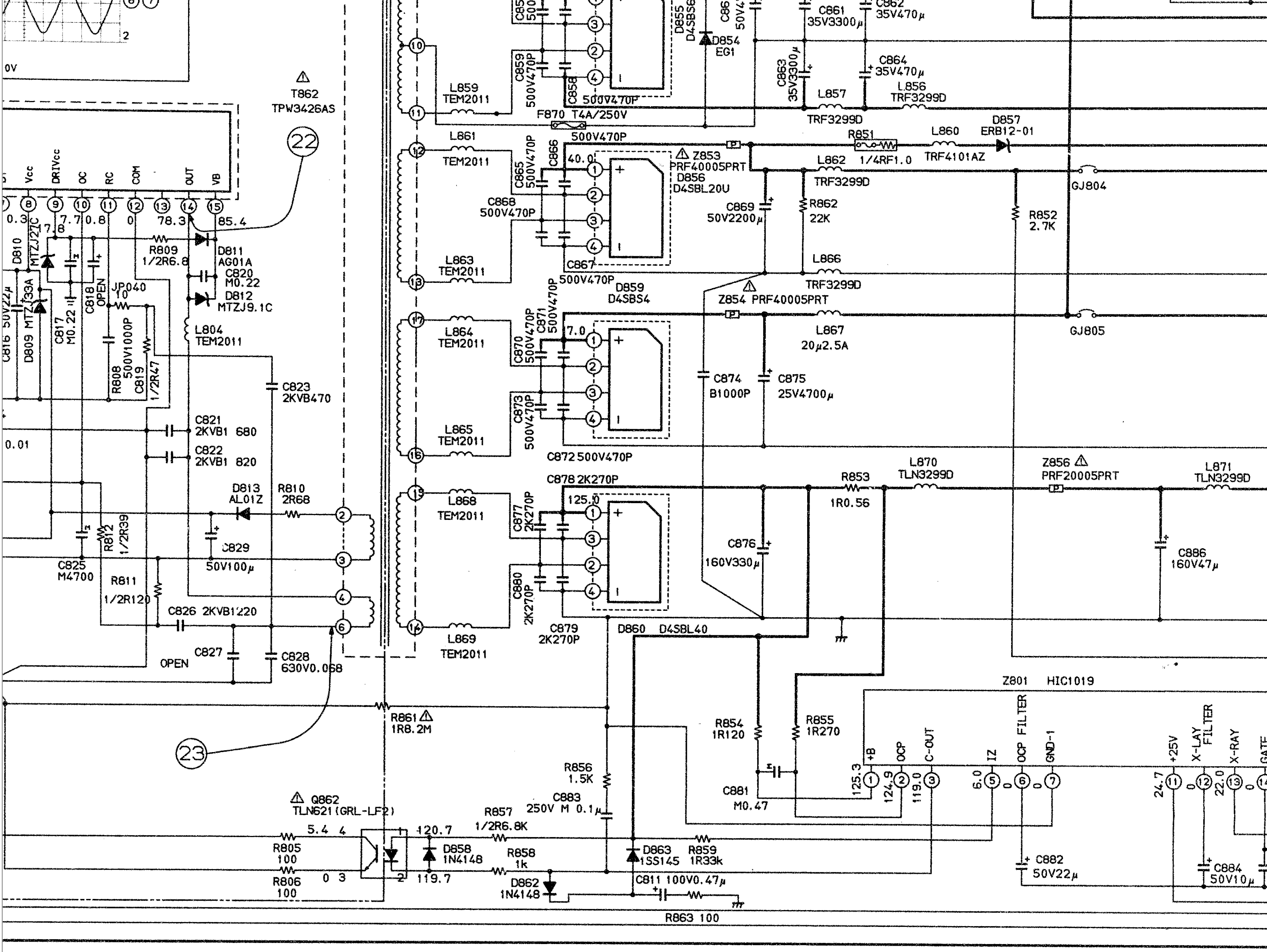
=1,000, M=1,000,000
hematic, all capacitor values less than 1 are expres-
than 1 in pF.
ematic, all inductor values more than 1 are expres-
han 1 in H.


13
14
15
16
A
B
C
D
TO SIGNAL
GND
9V-2
9V-1
P861A
3P
9V-2
9V-1
C8306
16V47µ
D8303
ERB12-01
R8306
OPEN
18.0
C8303
50V10µ
Q833
PQ09RD11
R8305
OPEN
P803A
8P
+7V
GND
+5V-1
GND
+36V
GND
+18V
GND
-18V
TO CONVER
SHORT
GJ806
L853
TLN3278D
L872 TLN3278D
Q873
OPEN
C887
OPEN
C888
OPEN
L855
TLN3299D
L854
TRF3299D
C861
35V3300µ
C862
35V470µ
C864
35V470µ
L856
TRF3299D
L857
TRF3299D
R851
1/4RF1.0
L860
TRF4101AZ
D857
ERB12-01
L862
TRF3299D
GJ804
R862
22K
R852
2.7K
L866
TRF3299D
05PRT
GJ805
L867
20µ2.5A
75
V4700µ
P860B
8P
AUDIO +40V
AUDIO +40V
AUDIO GND
AUDIO GND
GND
GND
+7V
+7V
TO SIGNAL
L870
Z856 ⚠
L871

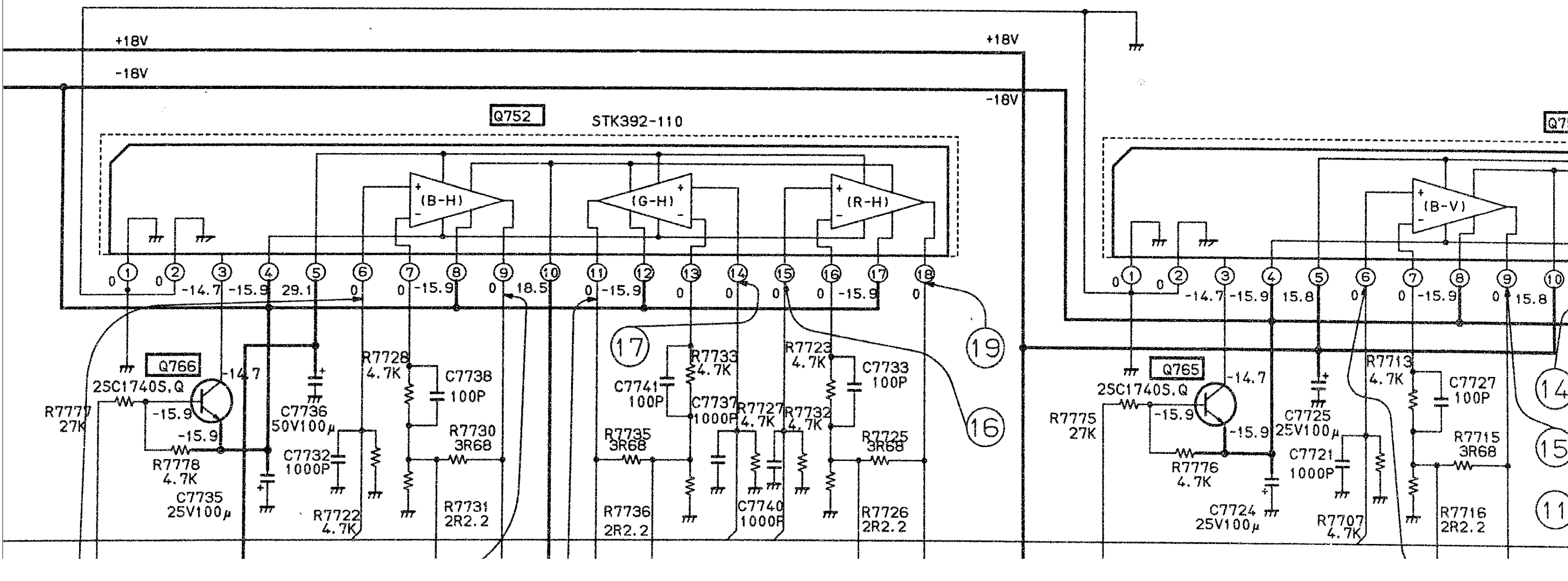

C
D
E
F
G
H
L722 PL-1000J
C767 390P
C763 390P
L720 PL-1000J
L723 PL-2200J
C765 1800P
C761 1800P
L721 PL-2200J
R741 910
C766 5600P
C762 5600P
R736 910
L726 PL-1000J
C775 390P
C771 390P
L724 PL-1000J
L727 PL-2200J
C773 1800P
C769 1800P
L725 PL-2200J
R751 910
C774 5600P
C770 5600P
R746 910
L728 PL-1000J
C779 390P
C783 390P
L730 PL-1000J
L729 PL-2200J
C777 1800P
C781 1800P
L731 PL-2200J
R756 910
C778 5600P
C782 5600P
R761 910
R743 3.3K
R744 3.6K
R742 1.5K
R739 3.6K
R738 3.3K
R737 1.5K
Q715 M5218A
or TA75559PFA-1
R753 3.3K
R754 3.6K
R752 1.5K
R749 3.6K
R748 3.3K
R747 1.5K
Q717 M5218A
or TA75559PFA-1
R758 3.3K
R759 3.6K
R757 1.5K
R764 3.6K
R763 3.3K
R762 1.5K
Q719 M5218A
or TA75559PFA-1
VCC
VEE
9.0
0.4
0
2.2
2.1
-9.0
Z702 TEM2026D
Z703 TEM2026D
Z704 TEM2026D
Z705 TEM2026D
Z706 TEM2026D
Z707 TEM2026D
LC78816M
Q703
Q704
Q705
AOUT
BOUT
NC
REFH
refL
refH
GNDA
VCCA
REFL
LVCK
GNDD
DATB
MOD2
DATA
MOD1
BCLK
FSEL
SCLK
TSTO
VCCD
3.8
5.0
3.2
1.0
1.2
2.4
0.5
C741 16V47μ
C740 25V0.1
C742 16V47μ
C745 16V47μ
C744 25V0.1
C746 16V47μ
C749 16V47μ
C748 25V0.1
C750 16V47μ
C739 25V0.1
C743 25V0.1
C747 25V0.1
L748 TEM2105T
L749 TEM2105T
C718 47P
C717 47P
C726 25V0.1
C725 25V0.1
C724 25V0.1
VDD
MODN
DFA5
DFA4
VSS
DFA3
DFA2
DFA1
DFA0
RH
RV
GH
GV
DCK
BCK
WCK
BH
BV
VPA
HPA
DCTL
DCTH
NDT
@TB25
@TB24
@TB23
@TB22
@TB21
@TB20
Q701

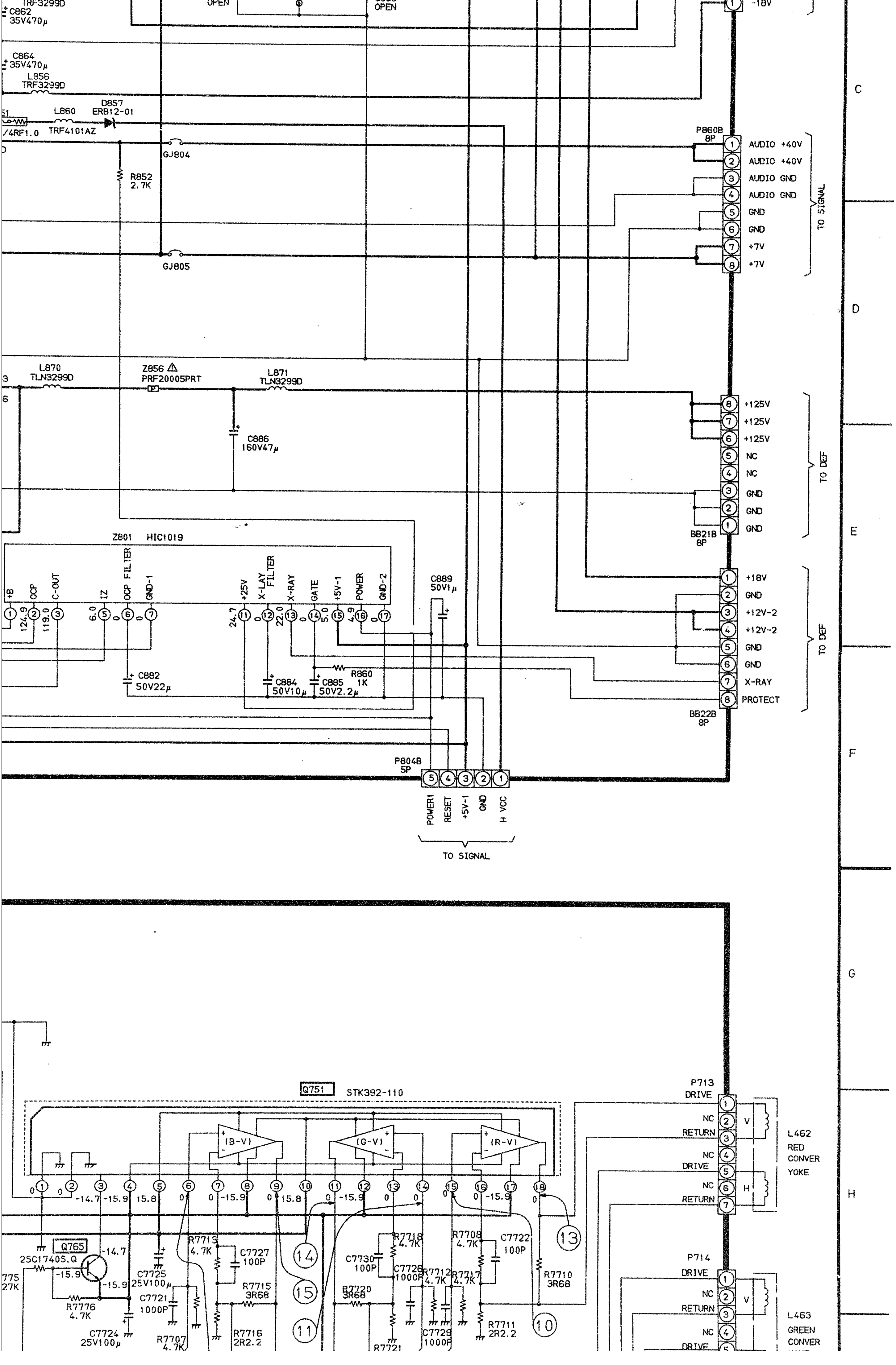
C783
390P
L730
PL-1000J
C781
1800P
L731
PL-2200J
C782
5600P
R761
910
0.4
2.2
2.2
-9.0
R764
3.6K
R763
3.3K
R762
1.5K
VEE
M5218A
5559PFA-1
P701
20P-CONNE
R783 100
R782 100
R781 100
R780 100
R779 100
R778 100
RV
GV
BV
AG
RH
GH
BH
AG
NSH
NC
NC
NC
+9V
-9V
+5V
+5V
DG
HD
AG
VD
C7701 6.3V220μ
C799 16V100μ
C798
16V100μ
L739 PL-56J
L740 PL-56J
L738 PL-56J
L737 PL-56J
C756
33P
C795
6.3V220μ
Z707 TEM2026D
78816M
Q705
BOUT
REFH
refH
VCCA
LVCK
DATB
DATA
BCLK
SCLK
VCCD
2.1
3.8
5.0
5.0
3.2
0
0
2
2.4
5.0
C749
16V47μ
C748
25V0.1
C747
25V0.1
D703
1SS131
or 1SS120-7
D704
1SS131
or 1SS120-7
D701
1SS131
or 1SS120-7
D702
1SS131
or 1SS120-7
Z711 TEM2026D
Z712 TEM2026D
L746 TEM2105T
L745 TEM2105T
L743
TEM2105T
L749 TEM2105T
C718
47P
C717 47P
C727
25V0.1
R721
22K
R720
10K
R722
2.2K
Q710
2SC2412K
0.1
0
5.3
C721
M0.1
Q707
TA8667P
C730 M0.1
R725
750K
L719
TRF3503K
GN2
VCC
VCC
VCC
VC1
2FS
GND
FLT
BIA
VSP
HSP
CSO
VSA
VIN
VO
MRF
YMA
PD0
3.8
8.5
2.9
8.4
3.8
2.4
5.8
C728 16V220μ
C729
25V0.1
R727
1/8 220
R718
3.3K
R717
6.2K
2.7
3.1
9.0
C722
0.1 25V
L747
TEM2105T
L744
TEM2105T
TP701
PLL
Q709
2SC752GTMY
R728
39K
R729
15K
C731
50V1μ
C732
.0082
C735
BCK
WCK
VSS
BH
BV
VPA
HPA
VDD
@DAP
@DIP
@TB0
@TB1
@TB2
@TB3
@TB4
@TB5
@TB6
@TB7
R
P801
F801
T3.15A/250V
P800
2P
TO SIGNAL
P805B
1P
TO POW SW
P802
3P
GJ801
OPEN
GJ802
OPEN
P708
RV
GV
BV
AG
RH
GH
BH
AG
NSH
NC
NC
NC
+9V
L770

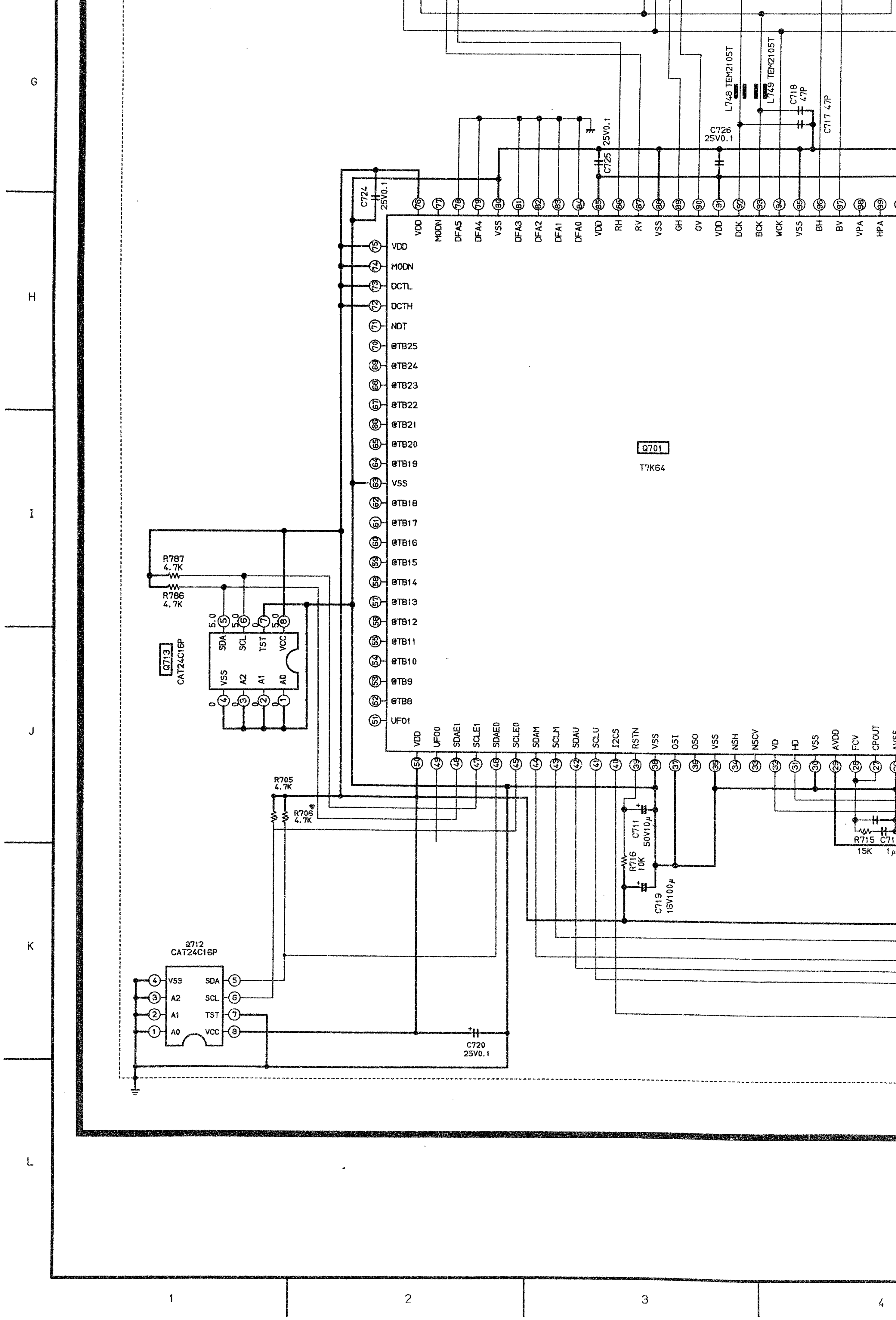

P801
F801
T3.15A/250V
P800
2P
C801
AC250V0.22μ
D816
TNR15G471K
T801
TRF3164G
C805
AC250V0.22μ
GJ809
SHORT
GJ810
SHORT
T802
OPEN
C806
OPEN
R819 1/2R2.2M
C803
AC250V2200P
C802
AC250V2200P
C804
AC250V3300P
TO SIGNAL
P805B
1P
5μs
BWL
1 5 V DC
2 5 V DC
3 50 mV AC
4 50 mV AC
1 AC 0V
T862
⑥⑦
Q801
STR-Z4267
VIN
GND
CONT
CSS
CD
DT
Vcc
DRIVcc
OC
RC
COM
OUT
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑬
156.7
0
6.1
2.3
5.8
5.9
3.6
0.3
7.8
7.7
0.8
0
78.3
R809
1/2R6.8
D805 MTZJ9.1A
R818 OPEN
D806 MTZJ27C
C830 M1μ
C814 200V2.2μ
D807 OPEN
D808 OPEN
R802 1K
R807 27K
C815 M0.47
C816 50V22μ
D809 MTZJ33A
D810 MTZJ27C
C817 M0.22
C818 OPEN
JP040
10
R808 500V1000P
C819
1/2R47
L803
TEM2011
C824
500VB 0.01
R815 OPEN
R814
1/2R820
R816
3R22K
C825
M4700
R812
1/2R39
R811
1/2R120
C826
OPEN
R823
2R47
D820
MTZJ5.6A
SR81
DG5D1-0(M)-2
D821
MTZJ12A
Q821
RN1201
R822
1K
D822
MTZJ4.3A
C892
OPEN
R820
2W1.8
R821
5W4.7
D802
LN65860
C812
AC250V4700
L802 TLN3481AH
F860
T2.5A/250V
C813
AC250V4700
C810
400V560μ
L801
TLN3481AH
TO POW SW
P802
3P
GJ801
OPEN
GJ802
OPEN
GJ812
OPEN
T804
TPW2009AZ
GJ811 OPEN
T803
TPW1562AZ
SR80
DG5D1-0(M)-2
Q812
2PC1815Y
D801
S1WBA20
D803
MTZJ12A
R803
68K
C831
50V22μ
D804
MTZJ12A
D892 MTZJ27A
Q811
RN1205
C891
50V1μ
D814
MTZJ5.6B
Q810
PQ05RR11
R804
1/4RF1.0
C807
25V2200μ
C808
16V470μ
D891
1N4148
R801
47K
C809
M1μ
D819
1N4148
D817 1N4148
D818 1N4148
P880
3P
M880A
X-RAY SHIELD
CONVER G
GND
CONVER R
CONVER B
GND
CONVER Ys
CONVER MUTE
I2C STP
P702B
8P
HEAT SINK
23476174
Q754
AN7805
OUT
IN
(+5 V)
GND
+5V
5.0
9.2
R7738
2R100
+18V
-18V
C7747
25V100μ
C7748
M0.1
C7749
M0.1
C7750
25V100μ
24383101S
Q755
AN7809
C7751
25V100μ
+9V
(+9 V)
9.0
15.8
D7710
MTZJ11B
C7752
M0.1
C7753
M0.1
C7754
25V100μ
P708
RV
GV
BV
AG
RH
GH
BH
AG
NSH
NC
NC
NC
+9V
L7701
L7702
L7703
L7704
L7705
L7706
TEM2011
Q756
AN79M09F
D7711
MTZJ11B
C7755
25V100μ
-18V
-14.7
Q766
2SC1740S,Q
R7777
27K
-15.9
R7778
4.7K
C7735
25V100μ

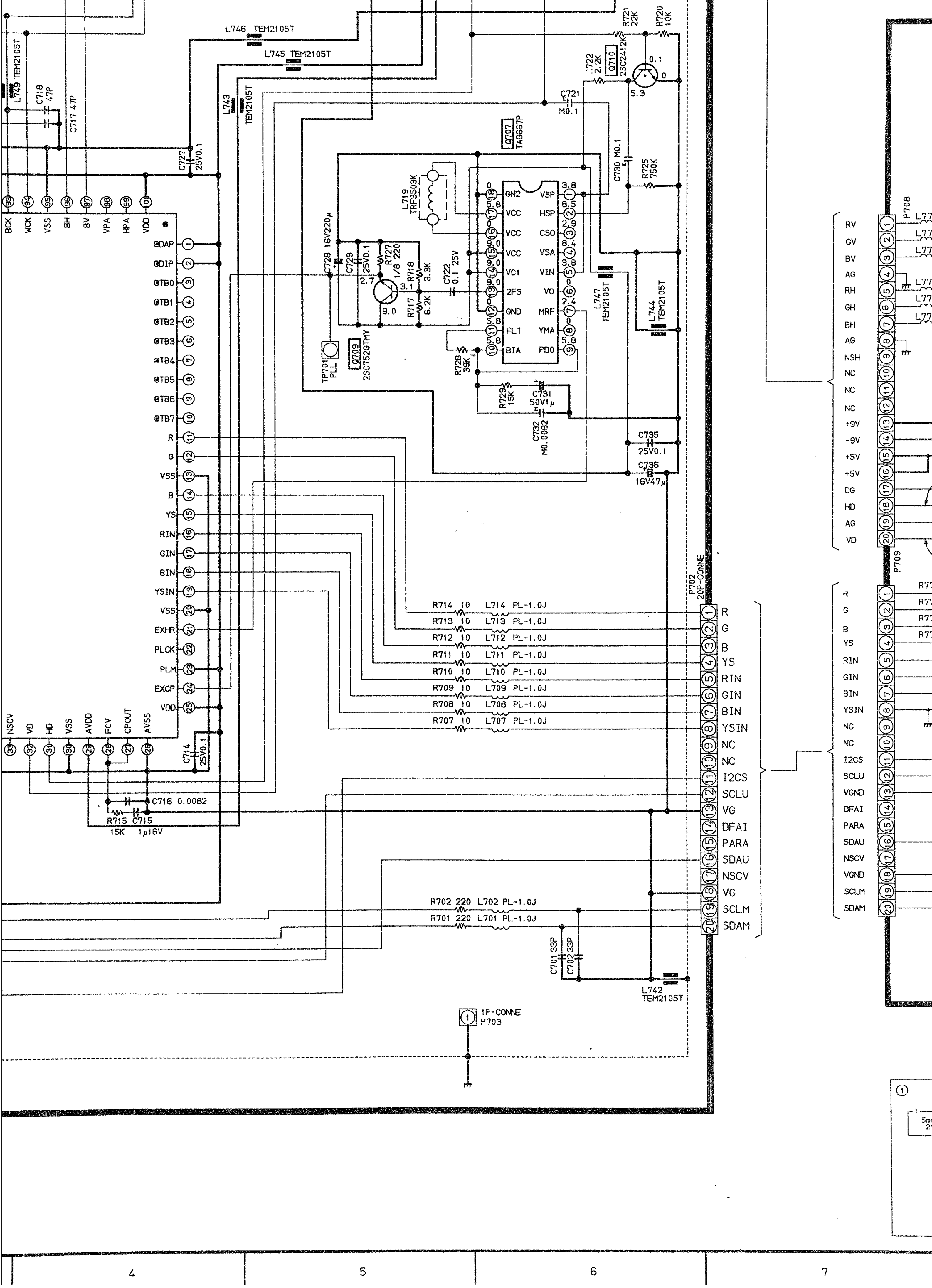

T862
TPW3426AS
Vcc
DRIVcc
OC
RC
COM
OUT
VB
D810 MTZJ27C
D809 MTZJ33A
C816 50V22μ
C817 M0.22
C818 OPEN
JP040
R808 500V1000P
C819 1/2R47
R809 1/2R6.8
D811 AG01A
C820 M0.22
D812 MTZJ9.1C
L804 TEM2011
C823 2KVB470
C821 2KVB1 680
C822 2KVB1 820
D813 AL01Z
R810 2R68
C825 M4700
R812 1/2R39
C829 50V100μ
R811 1/2R120
C826 2KVB1220
C827 OPEN
C828 630V0.068
L859 TEM2011
C859 500V470P
C858 500V470P
F870 T4A/250V
L861 TEM2011
C865 500V470P
C866
C868 500V470P
C867 500V470P
L863 TEM2011
Z853 PRF40005PRT
D856 D4SBL20U
D855 D4SBS6
D854 EG1
D859 D4SBS4
L864 TEM2011
C870 500V470P
C871 500V470P
L865 TEM2011
C873 500V470P
C872 500V470P
L868 TEM2011
C877 2K270P
C878 2K270P
C880 2K270P
C879 2K270P
L869 TEM2011
C861 35V3300μ
C862 35V470μ
C863 35V3300μ
C864 35V470μ
L857 TRF3299D
L856 TRF3299D
R851 1/4RF1.0
L860 TRF4101AZ
D857 ERB12-01
L862 TRF3299D
C869 50V2200μ
R862 22K
R852 2.7K
GJ804
L866 TRF3299D
Z854 PRF40005PRT
L867 20μ2.5A
C874 B1000P
C875 25V4700μ
GJ805
R853 1R0.56
L870 TLN3299D
Z856 PRF20005PRT
L871 TLN3299D
C876 160V330μ
C886 160V47μ
D860 D4SBL40
Z801 HIC1019
R854 1R120
R855 1R270
C881 M0.47
+B
OCP
C-OUT
IZ
OCP FILTER
GND-1
+25V
X-LAY FILTER
X-RAY
C882 50V22μ
C884 50V10μ
R861 1R8.2M
R856 1.5K
C883 250V M 0.1μ
Q862 TLN621(GRL-LF2)
R805 100
R806 100
D858 1N4148
R857 1/2R6.8K
R858 1k
D862 1N4148
D863 1SS145
R859 1R33k
C811 100V0.47μ
R863 100
㉒
㉓

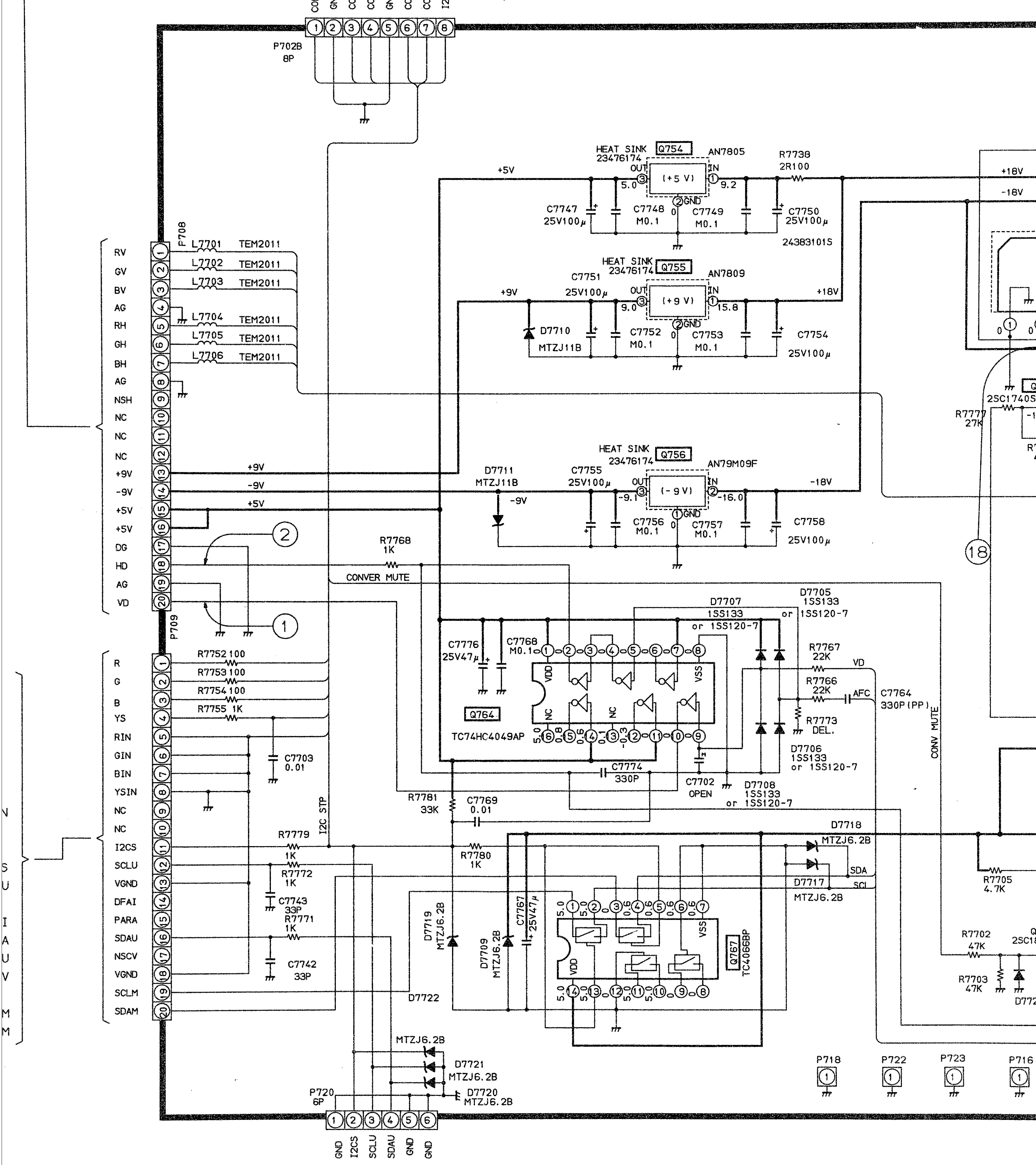
U801 POWER


+18V
-18V
Q752
STK392-110
(B-H)
(G-H)
(R-H)
(B-V)
Q766
2SC1740S,Q
R7777 27K
R7778 4.7K
C7735 25V100μ
C7736 50V100μ
C7732 1000P
R7722 4.7K
R7728 4.7K
C7738 100P
R7730 3R68
R7731 2R2.2
C7741 100P
R7733 4.7K
C7737 1000P
R7735 3R68
R7736 2R2.2
R7727 4.7K
C7740 1000P
R7723 4.7K
R7732 4.7K
C7733 100P
R7725 3R68
R7726 2R2.2
Q765
2SC1740S,Q
R7775 27K
R7776 4.7K
C7724 25V100μ
C7725 25V100μ
C7721 1000P
R7713 4.7K
C7727 100P
R7715 3R68
R7707 4.7K
R7716 2R2.2
⑯
⑰
⑲

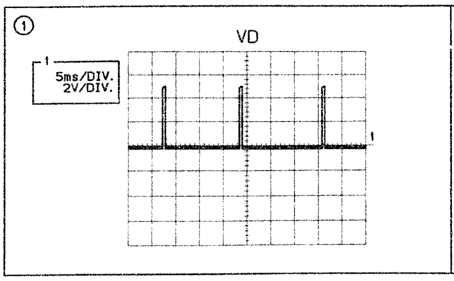

TRF3299D
C862
35V470μ
OPEN
OPEN
-18V
C864
35V470μ
L856
TRF3299D
L860
D857
ERB12-01
TRF4101AZ
/4RF1.0
GJ804
R852
2.7K
GJ805
P860B
8P
AUDIO +40V
AUDIO +40V
AUDIO GND
AUDIO GND
GND
GND
+7V
+7V
TO SIGNAL
L870
TLN3299D
Z856 ⚠
PRF20005PRT
L871
TLN3299D
C886
160V47μ
+125V
+125V
+125V
NC
NC
GND
GND
GND
TO DEF
BB21B
8P
Z801 HIC1019
+B
OCP
C-OUT
IZ
OCP FILTER
GND-1
+25V
X-LAY FILTER
X-RAY
GATE
+5V-1
POWER
GND-2
124.9
119.0
6.0
24.7
22.0
5.0
4.9
C889
50V1μ
+18V
GND
+12V-2
+12V-2
GND
GND
X-RAY
PROTECT
TO DEF
BB22B
8P
C882
50V22μ
C884
50V10μ
C885
50V2.2μ
R860
1K
P804B
5P
POWER1
RESET
+5V-1
GND
H VCC
TO SIGNAL
Q751
STK392-110
(B-V)
(G-V)
(R-V)
P713
DRIVE
NC
RETURN
NC
DRIVE
NC
RETURN
V
H
L462
RED
CONVER
YOKE
-14.7
-15.9
15.8
15.8
-15.9
Q765
2SC1740S.Q
775
27K
R7776
4.7K
C7724
25V100μ
C7725
25V100μ
C7721
1000P
R7707
4.7K
R7713
4.7K
C7727
100P
R7715
3R68
R7716
2R2.2
C7730
100P
R7720
3R68
R7721
R7718
4.7K
C7726
1000P
C7729
1000P
R7712
4.7K
R7717
4.7K
R7708
4.7K
C7722
100P
R7711
2R2.2
R7710
3R68
⑩
⑪
⑬
⑭
⑮
P714
DRIVE
NC
RETURN
NC
DRIVE
L463
GREEN
CONVER
C
D
E
F
G
H


G
H
I
J
K
L
1
2
3
4
L748 TEM2105T
L749 TEM2105T
C718 47P
C717 47P
C726 25V0.1
25V0.1
C725
C724 25V0.1
VDD
MODN
DFA5
DFA4
VSS
DFA3
DFA2
DFA1
DFA0
VDD
RH
RV
VSS
GH
GV
VDD
DCK
BCK
WCK
VSS
BH
BV
VPA
HPA
VDD
MODN
DCTL
DCTH
NDT
@TB25
@TB24
@TB23
@TB22
@TB21
@TB20
@TB19
VSS
@TB18
@TB17
@TB16
@TB15
@TB14
@TB13
@TB12
@TB11
@TB10
@TB9
@TB8
UFO1
Q701
T7K64
VDD
UFO0
SDAE1
SCLE1
SDAE0
SCLE0
SDAM
SCLM
SDAU
SCLU
I2CS
RSTN
VSS
OSI
OSO
VSS
NSH
NSCV
VD
HD
VSS
AVDD
FCV
CPOUT
R787 4.7K
R786 4.7K
Q713
CAT24C16P
SDA
SCL
TST
VCC
VSS
A2
A1
A0
5.0
0
R705 4.7K
R706 4.7K
C711 50V10μ
R716 10K
C719 16V100μ
R715 15K
Q712
CAT24C16P
C720 25V0.1

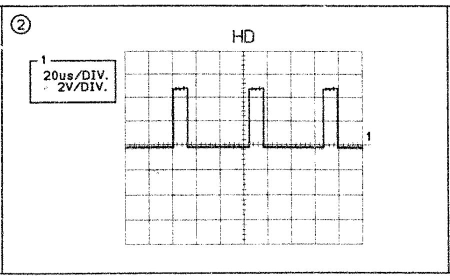

L746 TEM2105T
L745 TEM2105T
L749 TEM2105T
C718 47P
C717 47P
L743 TEM2105T
C727 25V0.1
R721 22K
R720 10K
R722 2.2K
Q710 2SC2412K
0.1
0
5.3
C721 M0.1
Q707 TA8667P
C730 M0.1
R725 750K
L719 TRF3503K
GN2
VCC
VC1
2FS
GND
FLT
BIA
VSP
HSP
CSO
VSA
VIN
VO
MRF
YMA
PDO
C728 16V220μ
C729 25V0.1
R727 1/8 220
R718 3.3K
C722 0.1 25V
R717 6.2K
2.7
3.1
9.0
TP701 PLL
Q709 2SC752GTMY
R728 39K
R729 15K
C731 50V1μ
C732 M0.0082
L747 TEM2105T
L744 TEM2105T
C735 25V0.1
C736 16V47μ
BCK
WCK
VSS
BH
BV
VPA
HPA
VDD
@DAP
@DIP
@TB0
@TB1
@TB2
@TB3
@TB4
@TB5
@TB6
@TB7
R
G
B
YS
RIN
GIN
BIN
YSIN
EXHR
PLCK
PLM
EXCP
NSCV
VD
HD
AVDD
FCV
CPOUT
AVSS
C714 25V0.1
C716 0.0082
R715 15K
C715 1μ16V
R714 10 L714 PL-1.0J
R713 10 L713 PL-1.0J
R712 10 L712 PL-1.0J
R711 10 L711 PL-1.0J
R710 10 L710 PL-1.0J
R709 10 L709 PL-1.0J
R708 10 L708 PL-1.0J
R707 10 L707 PL-1.0J
R702 220 L702 PL-1.0J
R701 220 L701 PL-1.0J
C701 33P
C702 33P
L742 TEM2105T
P702 20P-CONNE
NC
I2CS
SCLU
VG
DFAI
PARA
SDAU
SCLM
SDAM
1P-CONNE P703
P708
RV
GV
BV
AG
RH
GH
+9V
-9V
+5V
DG
NSH
P709
VGND
4
5
6
7



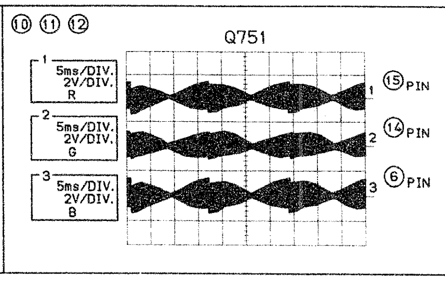
P702B
8P
HEAT SINK 23476174
Q754
AN7805
(+5 V)
OUT
IN
GND
5.0
9.2
R7738
2R100
+5V
+18V
-18V
C7747
25V100μ
C7748
M0.1
C7749
M0.1
C7750
25V100μ
24383101S
HEAT SINK 23476174
Q755
AN7809
(+9 V)
C7751
25V100μ
+9V
9.0
15.8
D7710
MTZJ11B
C7752
M0.1
C7753
M0.1
C7754
25V100μ
HEAT SINK 23476174
Q756
AN79M09F
(-9 V)
D7711
MTZJ11B
C7755
25V100μ
-9.1
-16.0
-9V
C7756
M0.1
C7757
M0.1
C7758
25V100μ
P708
L7701 TEM2011
L7702 TEM2011
L7703 TEM2011
L7704 TEM2011
L7705 TEM2011
L7706 TEM2011
RV
GV
BV
AG
RH
GH
BH
AG
NSH
NC
NC
NC
+9V
-9V
+5V
+5V
DG
HD
AG
VD
P709
R7768
1K
CONVER MUTE
D7707
1SS133
or 1SS120-7
D7705
1SS133
or 1SS120-7
C7776
25V47μ
C7768
M0.1
VDD
VSS
NC
NC
Q764
TC74HC4049AP
R7767
22K
VD
R7766
22K
AFC
C7764
330P(PP)
R7773
DEL.
D7706
1SS133
or 1SS120-7
CONV MUTE
C7774
330P
C7702
OPEN
D7708
1SS133
or 1SS120-7
R7781
33K
C7769
0.01
R
G
B
YS
RIN
GIN
BIN
YSIN
NC
NC
I2CS
SCLU
VGND
DFAI
PARA
SDAU
NSCV
VGND
SCLM
SDAM
R7752 100
R7753 100
R7754 100
R7755 1K
C7703
0.01
I2C STP
R7779
1K
R7772
1K
C7743
33P
R7771
1K
C7742
33P
R7780
1K
D7719
MTZJ6.2B
D7709
MTZJ6.2B
C7767
25V47μ
D7718
MTZJ6.2B
SDA
SCL
D7717
MTZJ6.2B
Q767
TC4066BP
D7722
MTZJ6.2B
D7721
MTZJ6.2B
D7720
MTZJ6.2B
P720
6P
GND
I2CS
SCLU
SDAU
GND
GND
P718
P722
P723
P716
R7705
4.7K
R7702
47K
R7703
47K
2SC1740S
R7777
27K
18



①
VD
5ms/DIV.
2V/DIV.

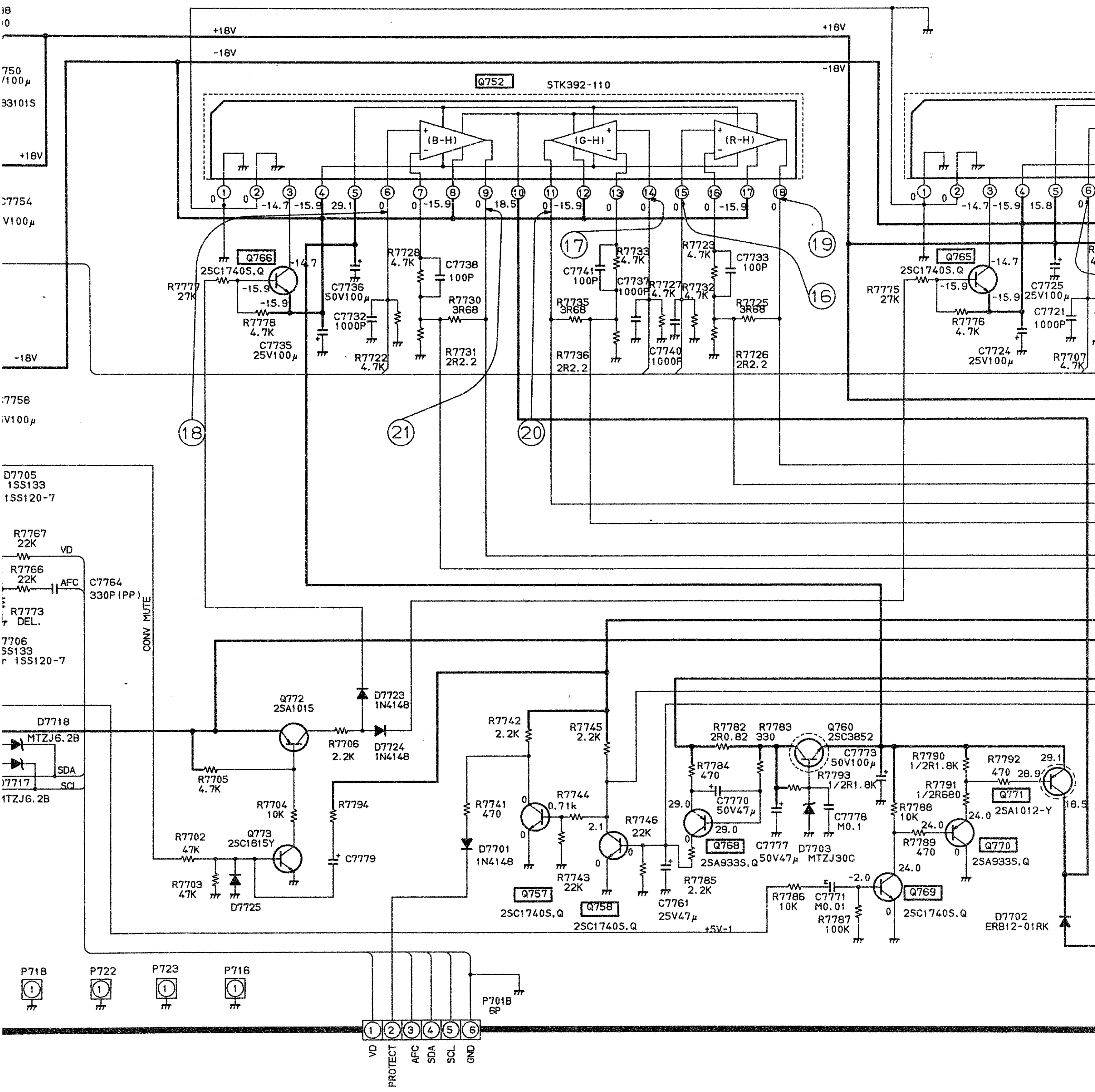


②
HD
20us/DIV.
2V/DIV.

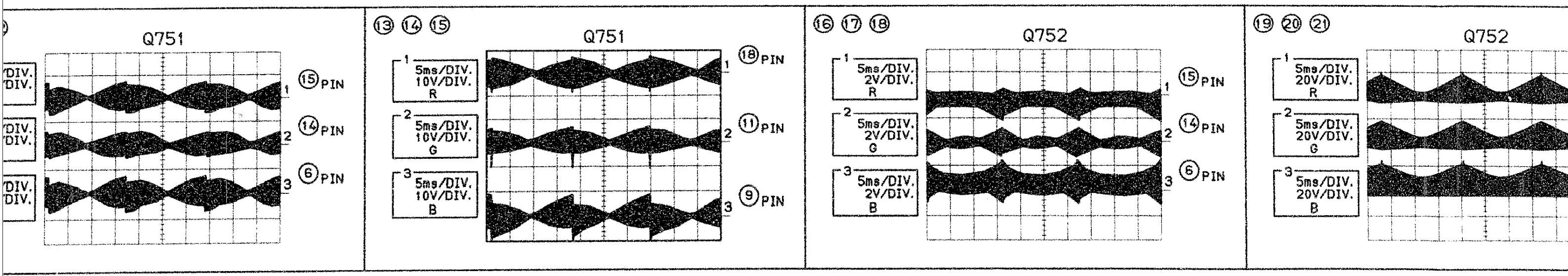


⑩ ⑪ ⑫
Q751
5ms/DIV.
2V/DIV.
R
5ms/DIV.
2V/DIV.
G
5ms/DIV.
2V/DIV.
B
⑮PIN
⑭PIN
⑥PIN

7 8 9 10

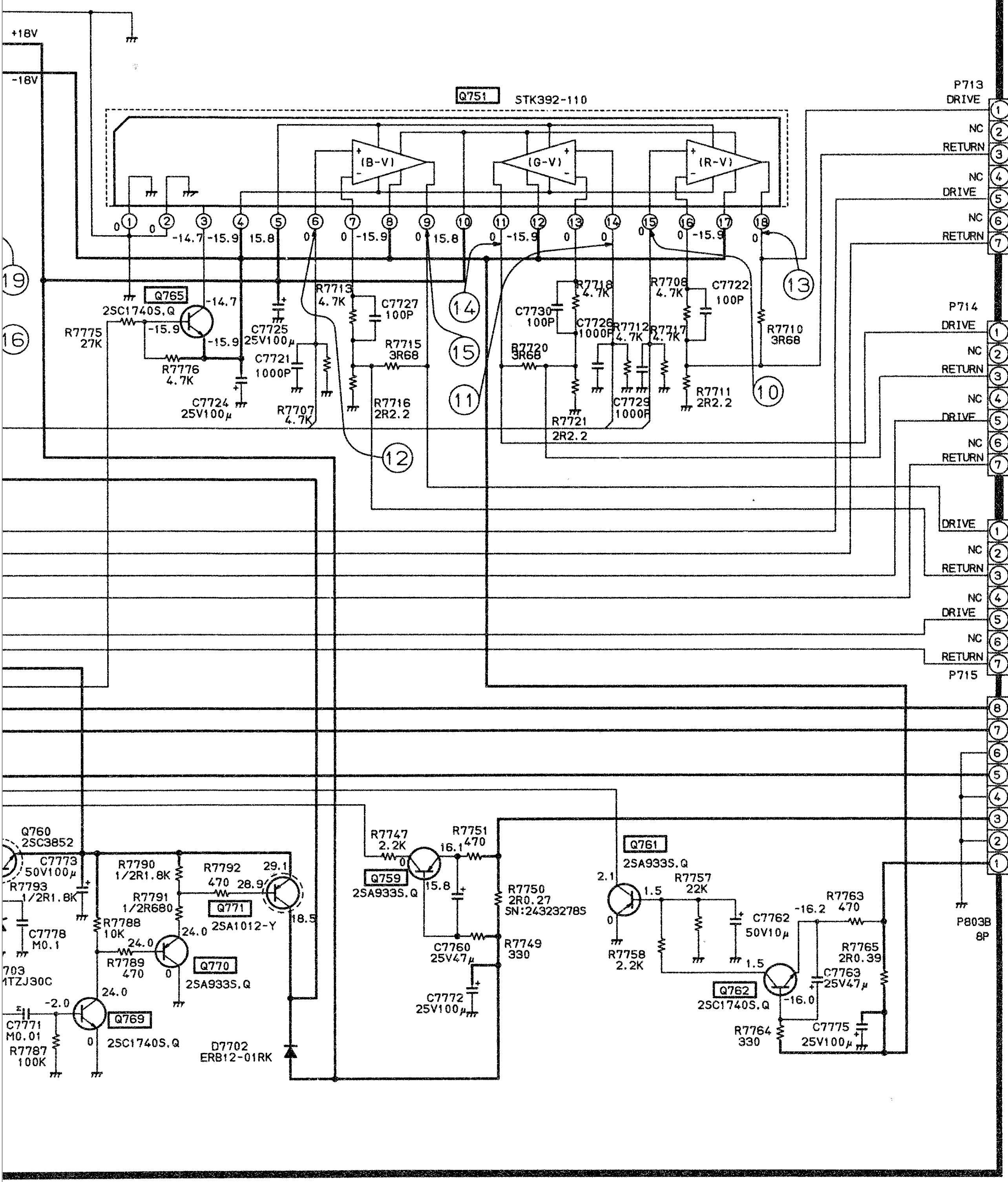


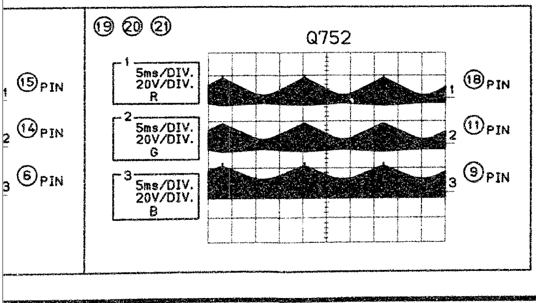
+18V
-18V
Q752
STK392-110
(B-H)
(G-H)
(R-H)
Q766
2SC1740S,Q
Q765
2SC1740S,Q
R7777 27K
R7778 4.7K
C7735 25V100μ
C7736 50V100μ
R7728 4.7K
C7738 100P
C7732 1000P
R7722 4.7K
R7730 3R68
R7731 2R2.2
C7741 100P
R7733 4.7K
C7737 1000P
R7735 3R68
R7736 2R2.2
R7727 4.7K
R7732 4.7K
C7740 1000P
R7723 4.7K
C7733 100P
R7725 3R68
R7726 2R2.2
R7775 27K
R7776 4.7K
C7725 25V100μ
C7721 1000P
C7724 25V100μ
R7707 4.7K
C7754
C7758
D7705 1SS133 1SS120-7
R7767 22K
VD
R7766 22K
AFC
C7764 330P(PP)
R7773 DEL.
D7706 1SS133 1SS120-7
CONV MUTE
D7718
MTZJ6.2B
SDA
SCL
D7717
MTZJ6.2B
Q772 2SA1015
R7706 2.2K
D7723 1N4148
D7724 1N4148
R7705 4.7K
R7704 10K
R7702 47K
Q773 2SC1815Y
R7703 47K
D7725
R7794
C7779
R7742 2.2K
R7741 470
D7701 1N4148
R7744 0.71k
R7743 22K
Q757 2SC1740S,Q
R7745 2.2K
R7746 22K
Q758 2SC1740S,Q
C7761 25V47μ
R7785 2.2K
R7782 2R0.82
R7783 330
Q760 2SC3852
C7773 50V100μ
R7784 470
C7770 50V47μ
R7793 1/2R1.8K
C7778 M0.1
Q768 2SA933S,Q
C7777 50V47μ
D7703 MTZJ30C
R7786 10K
C7771 M0.01
R7787 100K
Q769 2SC1740S,Q
+5V-1
R7790 1/2R1.8K
R7791 1/2R680
R7788 10K
R7789 470
Q770 2SA933S,Q
R7792 470
Q771 2SA1012-Y
D7702 ERB12-01RK
P718
P722
P723
P716
P701B 6P
VD
PROTECT
AFC
SDA
SCL
GND
⑯ ⑰ ⑱ ⑲ ⑳ ㉑



Q751
⑮PIN
⑭PIN
⑥PIN
⑬ ⑭ ⑮
Q751
5ms/DIV. 10V/DIV. R
5ms/DIV. 10V/DIV. G
5ms/DIV. 10V/DIV. B
⑱PIN
⑪PIN
⑨PIN
⑯ ⑰ ⑱
Q752
5ms/DIV. 2V/DIV. R
5ms/DIV. 2V/DIV. G
5ms/DIV. 2V/DIV. B
⑮PIN
⑭PIN
⑥PIN
⑲ ⑳ ㉑
Q752
5ms/DIV. 20V/DIV. R
5ms/DIV. 20V/DIV. G
5ms/DIV. 20V/DIV. B

10 11 12 13


+18V
-18V
Q751
STK392-110
(B-V)
(G-V)
(R-V)
-14.7
-15.9
15.8
0
Q765
2SC1740S,Q
R7775
27K
R7776
4.7K
C7724
25V100μ
C7725
25V100μ
C7721
1000P
R7707
4.7K
R7713
4.7K
C7727
100P
R7715
3R68
R7716
2R2.2
R7720
3R68
C7730
100P
R7718
4.7K
C7726
1000P
R7721
2R2.2
R7712
4.7K
C7729
1000P
R7708
4.7K
R7717
4.7K
C7722
100P
R7710
3R68
R7711
2R2.2
⑩
⑪
⑫
⑬
⑭
⑮
⑯
⑲
P713
DRIVE
NC
RETURN
V
H
L462
RED
CONVER
YOKE
P714
L463
GREEN
CONVER
YOKE
L464
BLUE
CONVER
YOKE
P715
+7V
+5V-1
GND
+36V
+18V
-18V
TO POWER
P803B
8P
Q760
2SC3852
C7773
50V100μ
R7793
1/2R1.8K
C7778
M0.1
703
1TZJ30C
C7771
M0.01
R7787
100K
-2.0
Q769
2SC1740S,Q
R7790
1/2R1.8K
R7791
1/2R680
R7788
10K
R7789
470
24.0
Q770
2SA933S,Q
R7792
470
28.9
29.1
18.5
Q771
2SA1012-Y
D7702
ERB12-01RK
R7747
2.2K
R7751
470
16.1
15.8
Q759
2SA933S,Q
R7750
2R0.27
SN:24323278S
C7760
25V47μ
R7749
330
C7772
25V100μ
Q761
2SA933S,Q
2.1
1.5
R7757
22K
R7758
2.2K
C7762
50V10μ
-16.2
R7763
470
R7765
2R0.39
C7763
25V47μ
Q762
2SC1740S,Q
-16.0
R7764
330
C7775
25V100μ
G
H
I
J
K
L
13
14
15
16



CONVER/POWER/D-CONV
50PJ98B/G
61PJ98B/G 4/6
PK2980

SCHEMATIC DIAGRAM MODEL : 50PJ98B / 50PJ98G (5/6)

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 3. Do not degrade the safety of the receiver through improper servicing.

030-9915

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position. Set other controls for best picture.

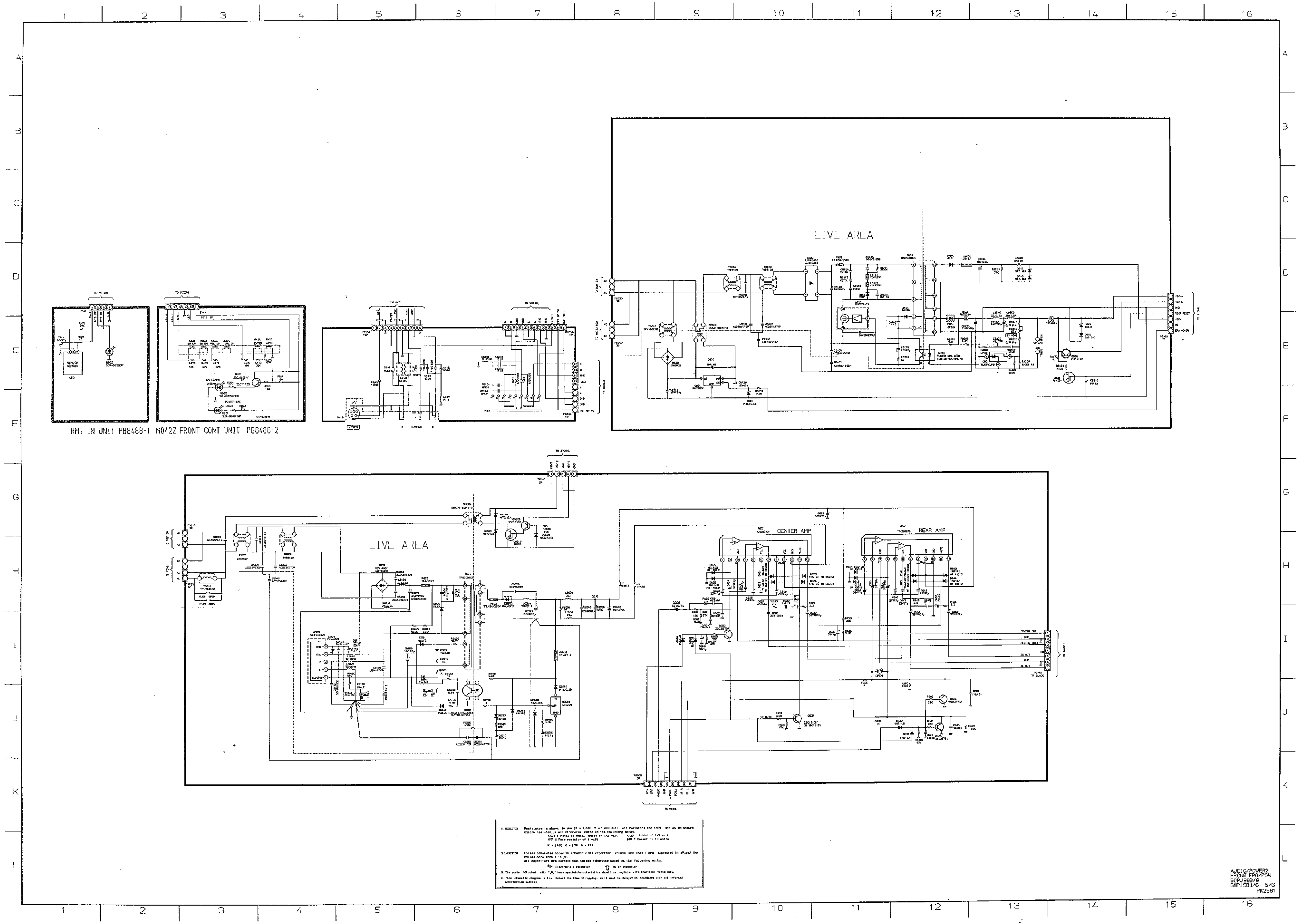
NOTES:

1. D.C. resistance value of a principal transformer is shown in this schematic diagram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less than 1 are expressed in µF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in µH, and the values less than 1 in H.



1. RESISTOR Resistance is shown in ohm [K = 1,000, M = 1,000,000]. All resistors are 1/6W and 5% tolerance carbon resister,unless otherwise noted as the following marks.
1/2R : Metal or Metal oxide of 1/2 watt 1/2S : Solid of 1/2 watt
1RF : Fuse resistor of 1 watt 10W : Cement of 10 watts
K = ±10% G = ±2% F = ±1%

2.CAPACITOR Unless otherwise noted in schematic,all capacitor values less than 1 are expressed in µF,and the values more than 1 in pF.
All capacitors are ceramic 50V, unless otherwise noted as the following marks.
Electrolitic capacitor Mylar capacitor

3. The parts indicated with "⚠" have specialcharacteristics should be replaced with identical parts only.

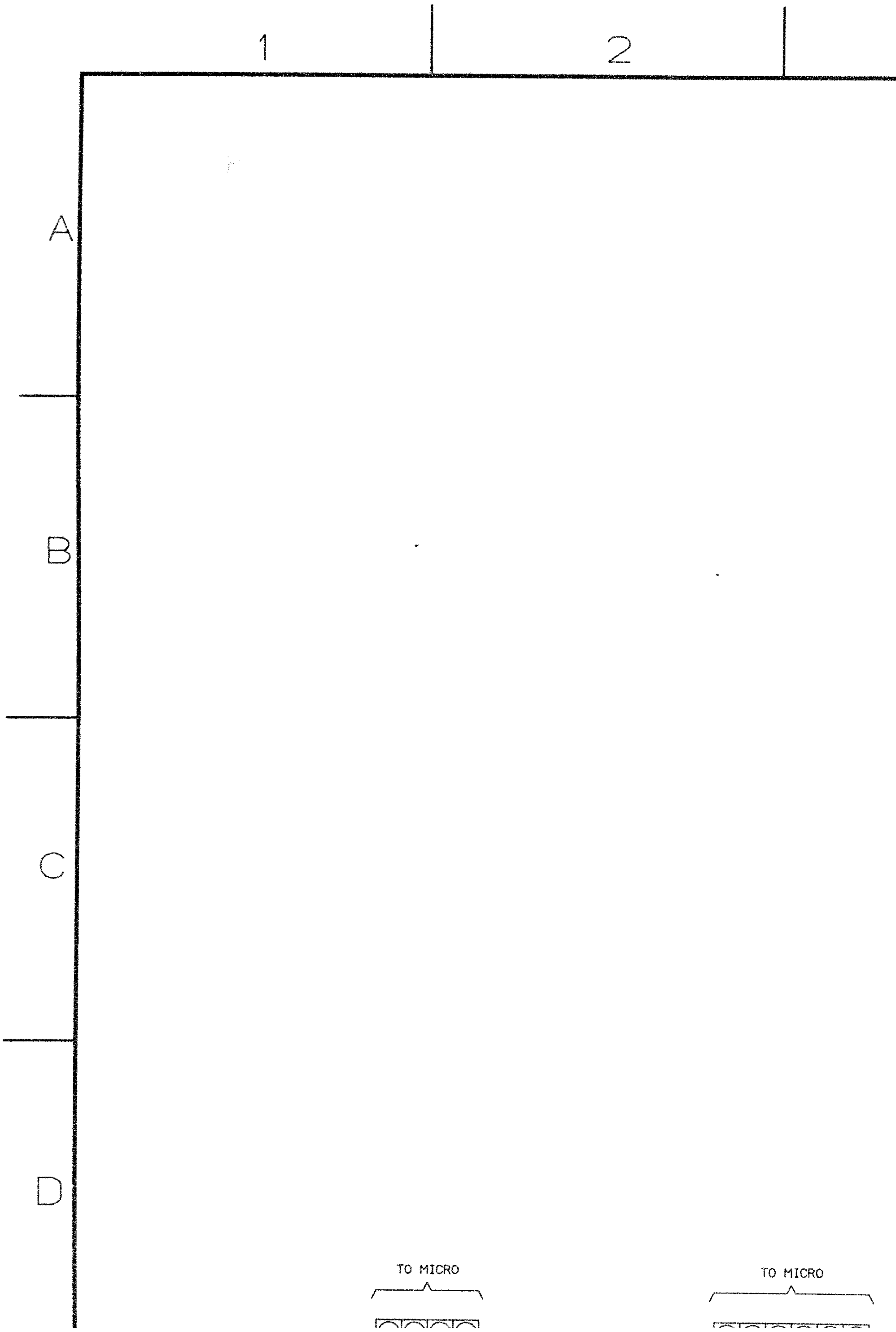
4. This schematic diagram is the latest the time of copying, so it must be changed in accordance with all informed modification notices.

AUDIO/POWER2
FRONT EPG/POW
50PJ98B/G
61PJ98B/G 5/6
PK2981

SCHEMATIC DIAGRAM MODEL : 50PJ98B / 50PJ98G

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate
ponents which have special characteristics important for safety and should be replaced only with types
those in the original circuit or specified in the parts list. The mounting position of replacements is to be i
with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTIC
3. Do not degrade the safety of the receiver through improper servicing.

030-9915

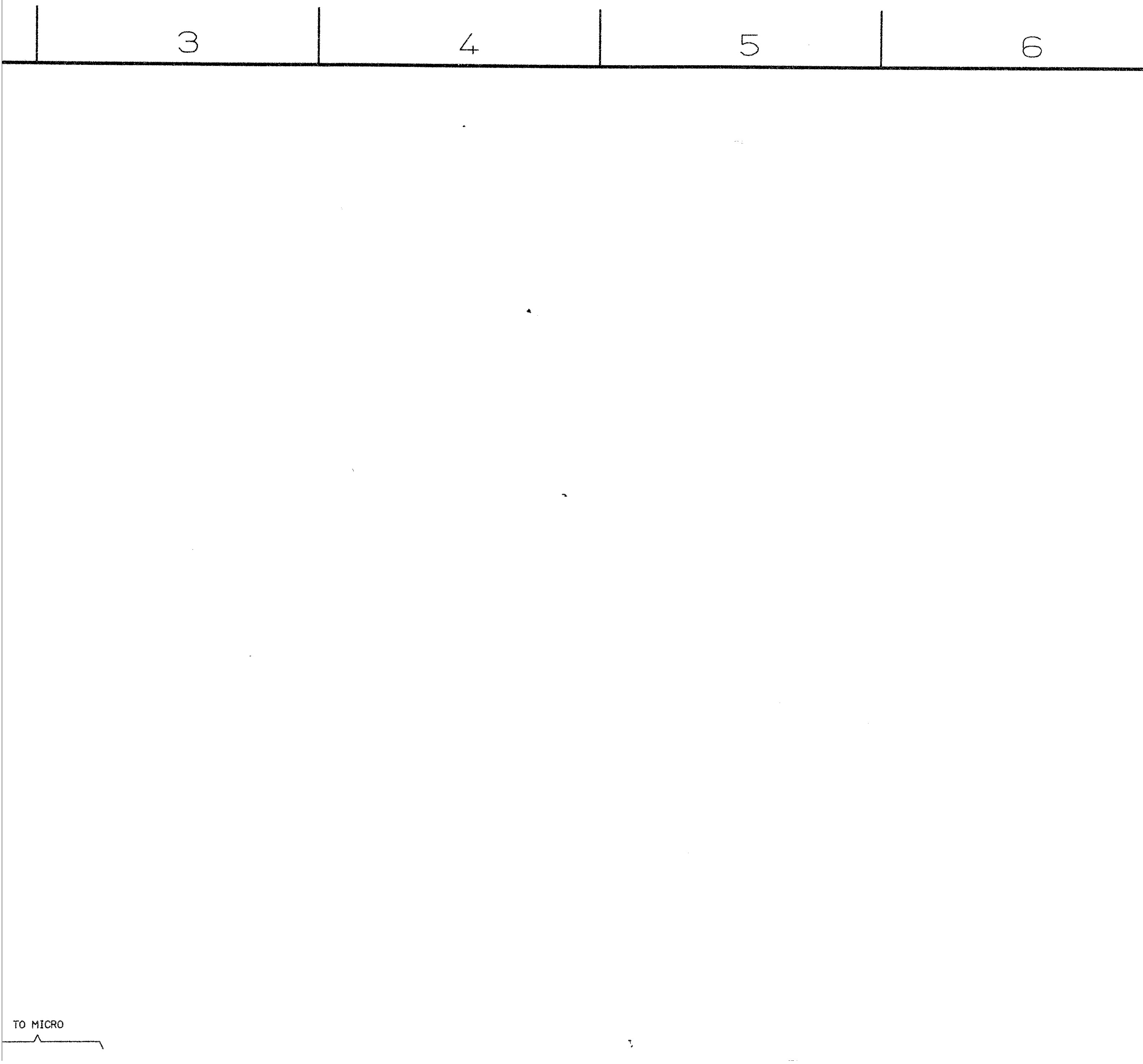


PJ98G (5/6)

st designate com-
 with types identical to
its is to be identical
FETY NOTICE on page

OBSERVATION OF VOLTAGES AND WAVEFORMS

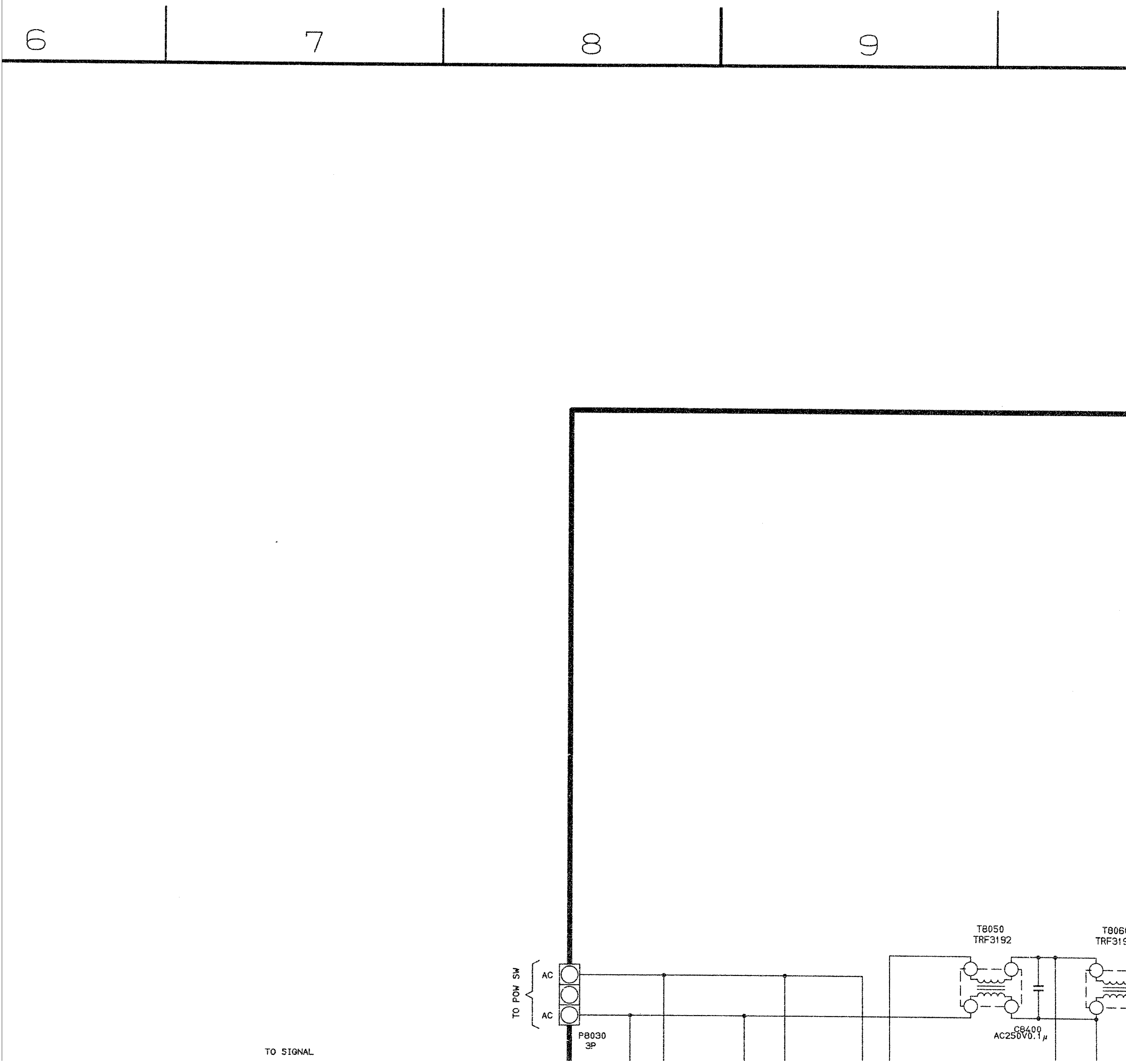
1. Voltages read with VTVM from point shown to chassis ground, line v
   volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capa
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid pos
   BRIGHTNESS control is almost in maximum position. Set other contro
   picture.



ground, line voltage 220
%.
nd a low capacity probe.
.
e in mid position and
t other controls for best

NOTES:

1. D.C. resistance value of a principal transformer is shown
   gram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.


6
7
8
9
T8050
TRF3192
T806
TRF319
TO POW SW
AC
AC
P8030
3P
C8400
AC250V0.1μ
TO SIGNAL

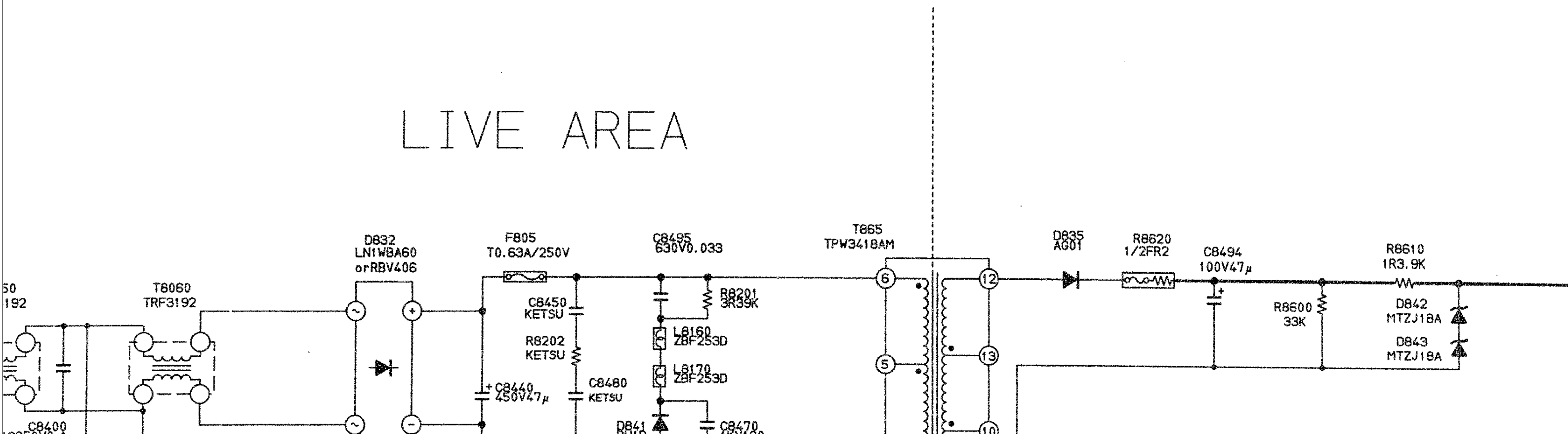
ner is shown in this schematic dia-
the circuit.
ice.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDU

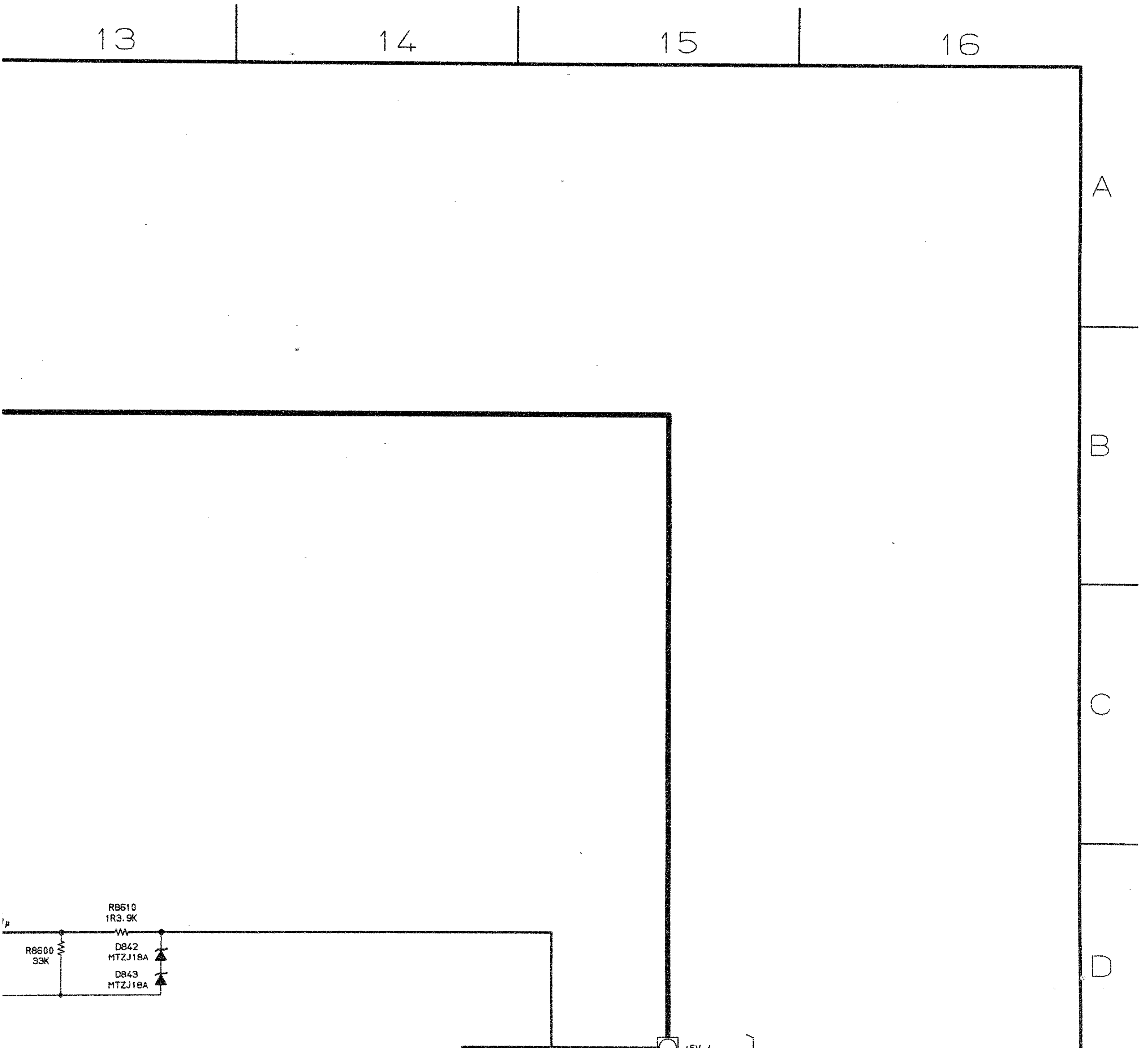
1. Resistance is shown in ohm, k=1,000, M=1,000,0
2. Unless other wise noted in schematic, all capacit sed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inducto sed in μH, and the values less than 1 in H.

10 11 12 13


LIVE AREA
50
192
T8060
TRF3192
C8400
D832
LN1WBA60
orRBV406
F805
T0.63A/250V
C8450
KETSU
R8202
KETSU
C8440
450V47μ
C8480
KETSU
C8495
630V0.033
R8201
3R39K
L8160
ZBF253D
L8170
ZBF253D
D841
C8470
T865
TPW3418AM
6
5
12
13
10
D835
AG01
R8620
1/2FR2
C8494
100V47μ
R8600
33K
R8610
1R3.9K
D842
MTZJ18A
D843
MTZJ18A

PACITOR and INDUCTOR

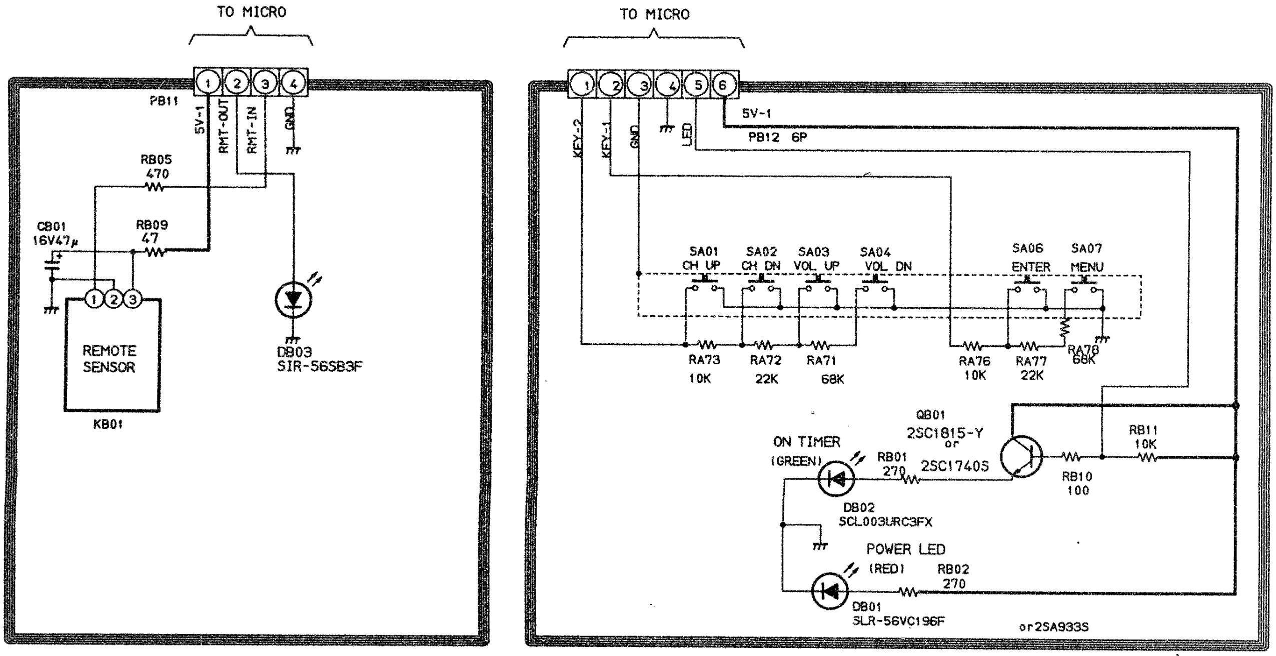
, k=1,000, M=1,000,000
schematic, all capacitor values less than 1 are expres-
ore than 1 in pF.
schematic, all inductor values more than 1 are expres-
ss than 1 in H.


13
14
15
16
A
B
C
D
R8610
1R3.9K
R8600
33K
D842
MTZJ18A
D843
MTZJ18A

C

D

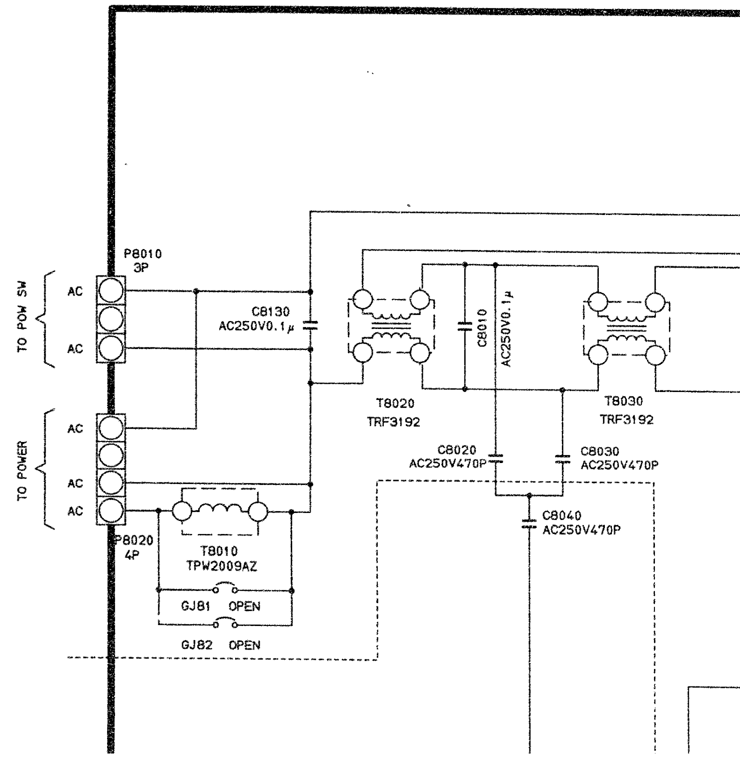
E


TO MICRO
PB11
5V-1
RMT-OUT
RMT-IN
GND
RB05
470
RB09
47
CB01
16V47μ
REMOTE SENSOR
KB01
DB03
SIR-56SB3F
TO MICRO
KEY-2
KEY-1
GND
LED
5V-1
PB12 6P
SA01
CH UP
SA02
CH DN
SA03
VOL UP
SA04
VOL DN
SA06
ENTER
SA07
MENU
RA73
10K
RA72
22K
RA71
68K
RA76
10K
RA77
22K
RA78
68K
QB01
2SC1815-Y
or
2SC1740S
RB11
10K
RB10
100
ON TIMER
(GREEN)
RB01
270
DB02
SCL003URC3FX
POWER LED
(RED)
RB02
270
DB01
SLR-56VC196F
or2SA933S

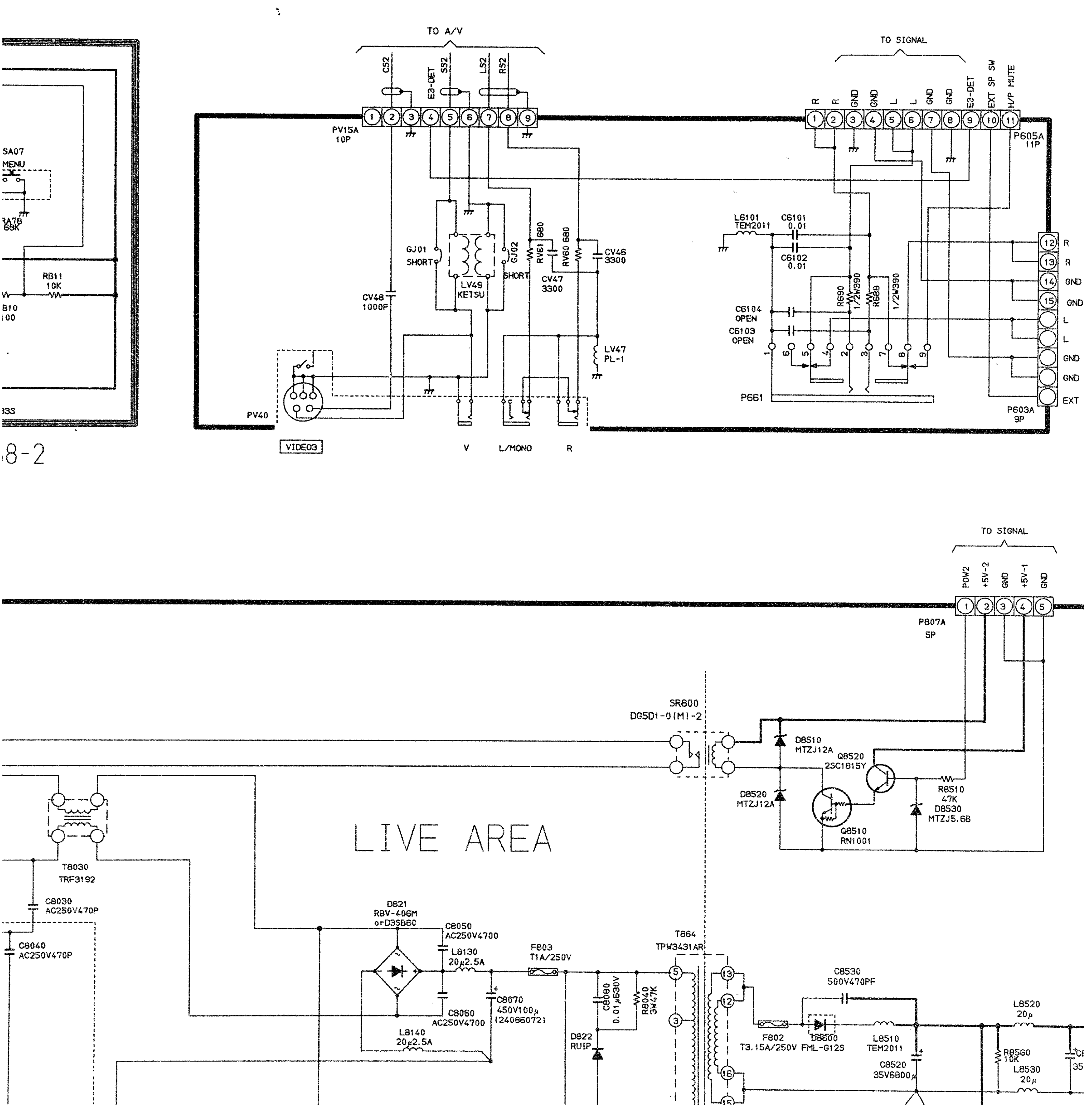
F

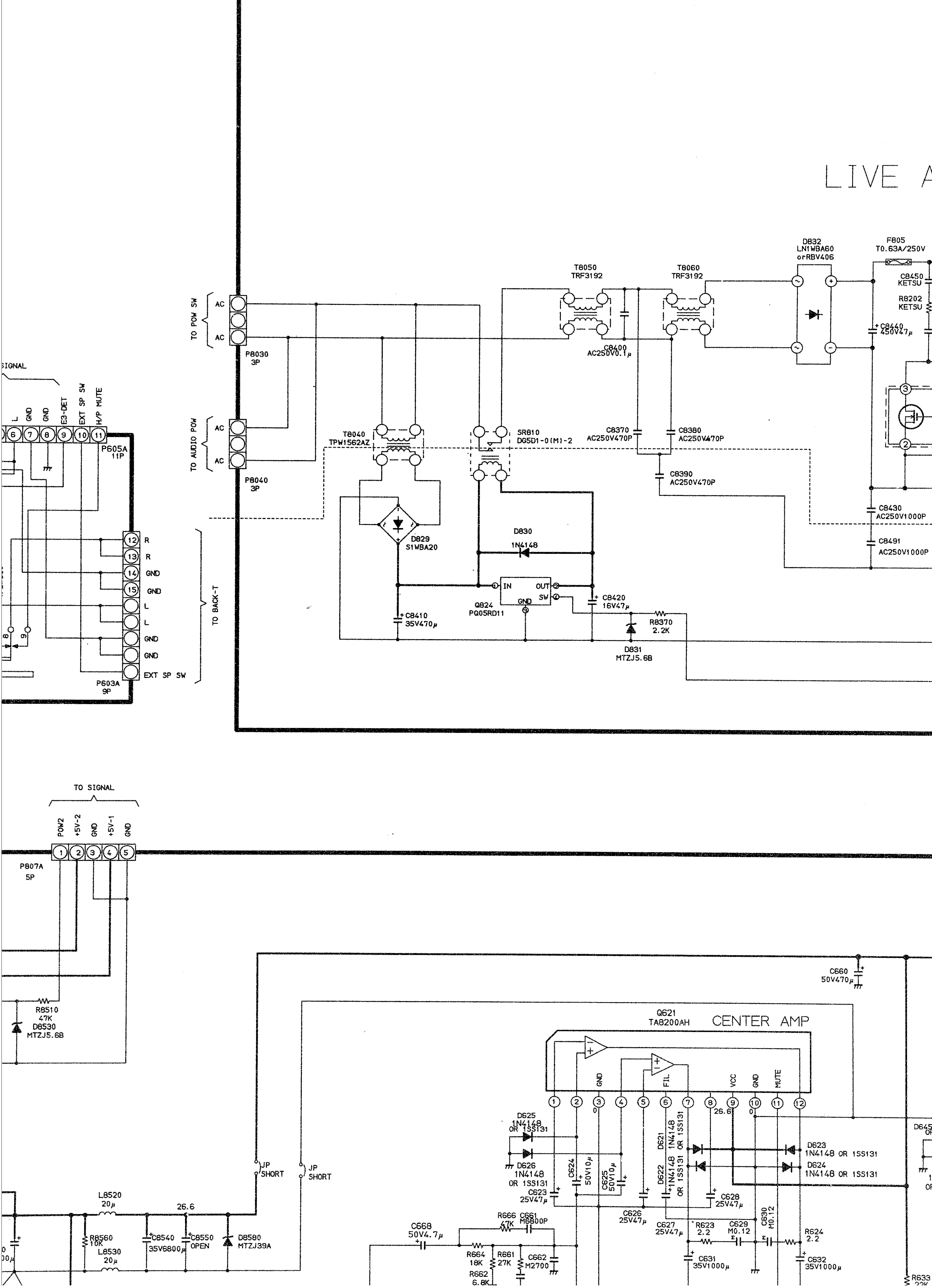
RMT IN UNIT PB8488-1 M042Z FRONT CONT UNIT PB8488-2

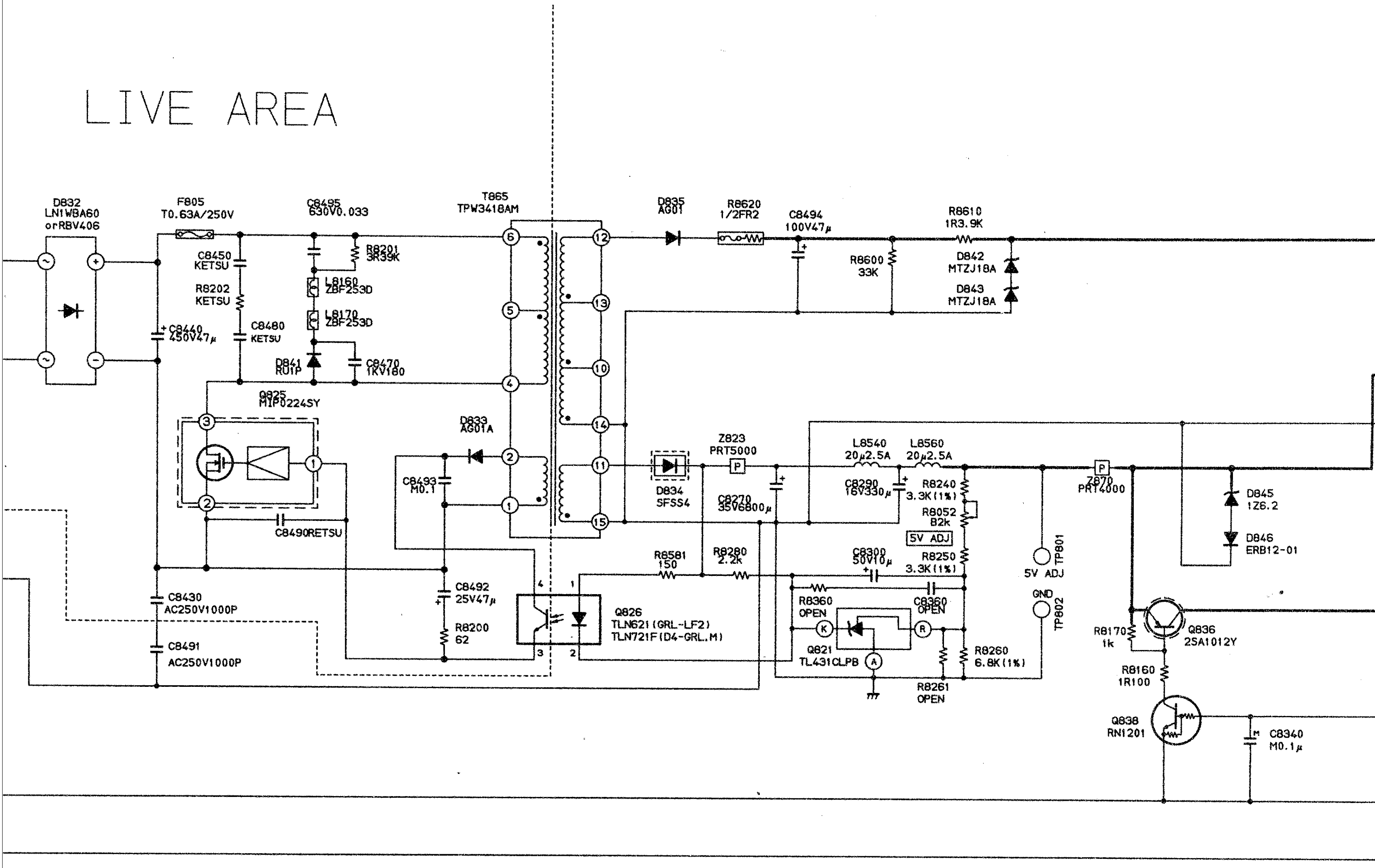
G

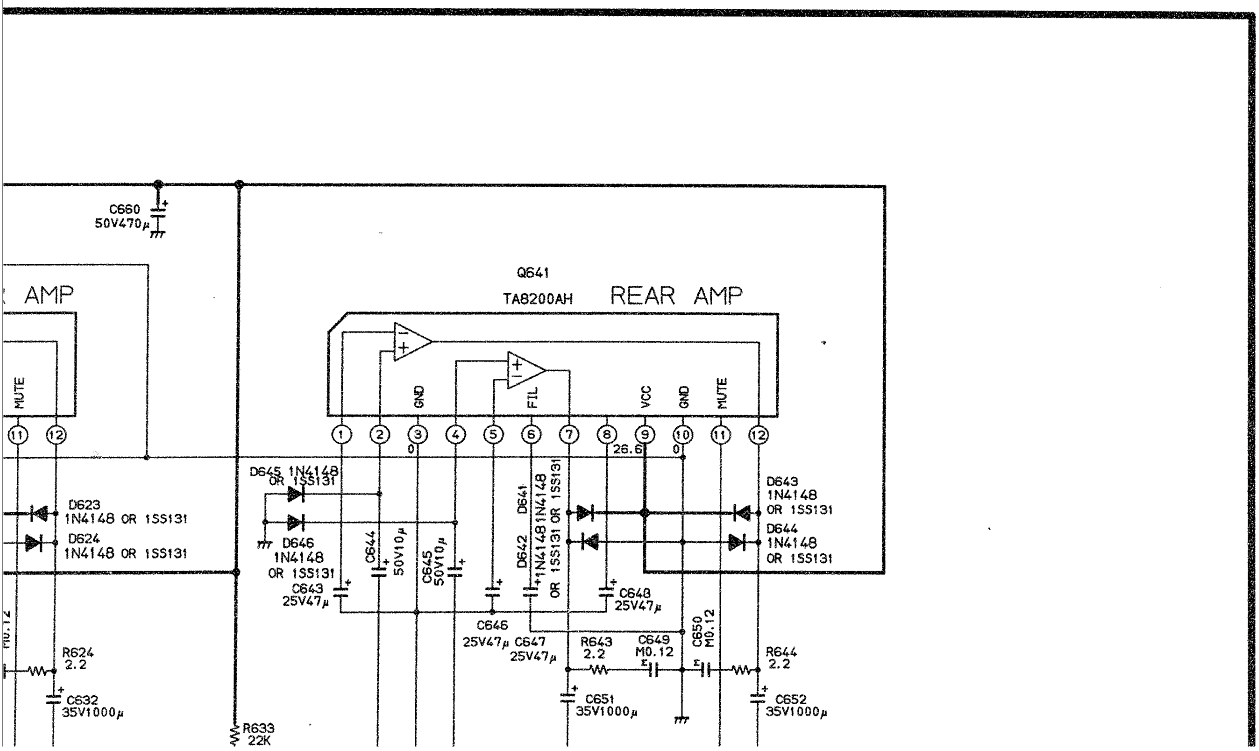

P8010
3P
TO POW SW
AC
AC
C8130
AC250V0.1μ
C8010
AC250V0.1μ
T8020
TRF3192
T8030
TRF3192
TO POWER
AC
AC
AC
P8020
4P
T8010
TPW2009AZ
GJ81 OPEN
GJ82 OPEN
C8020
AC250V470P
C8030
AC250V470P
C8040
AC250V470P

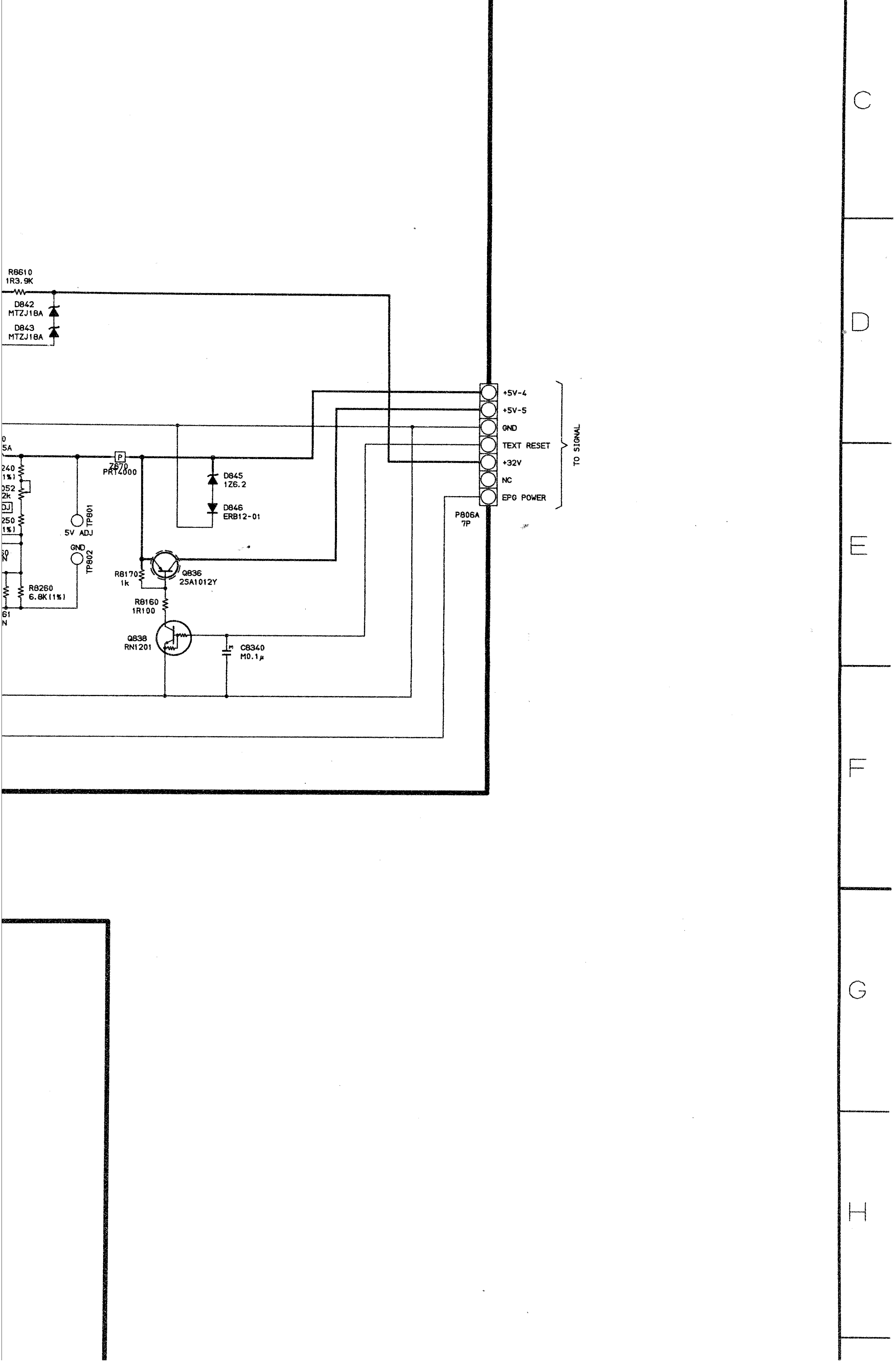
H

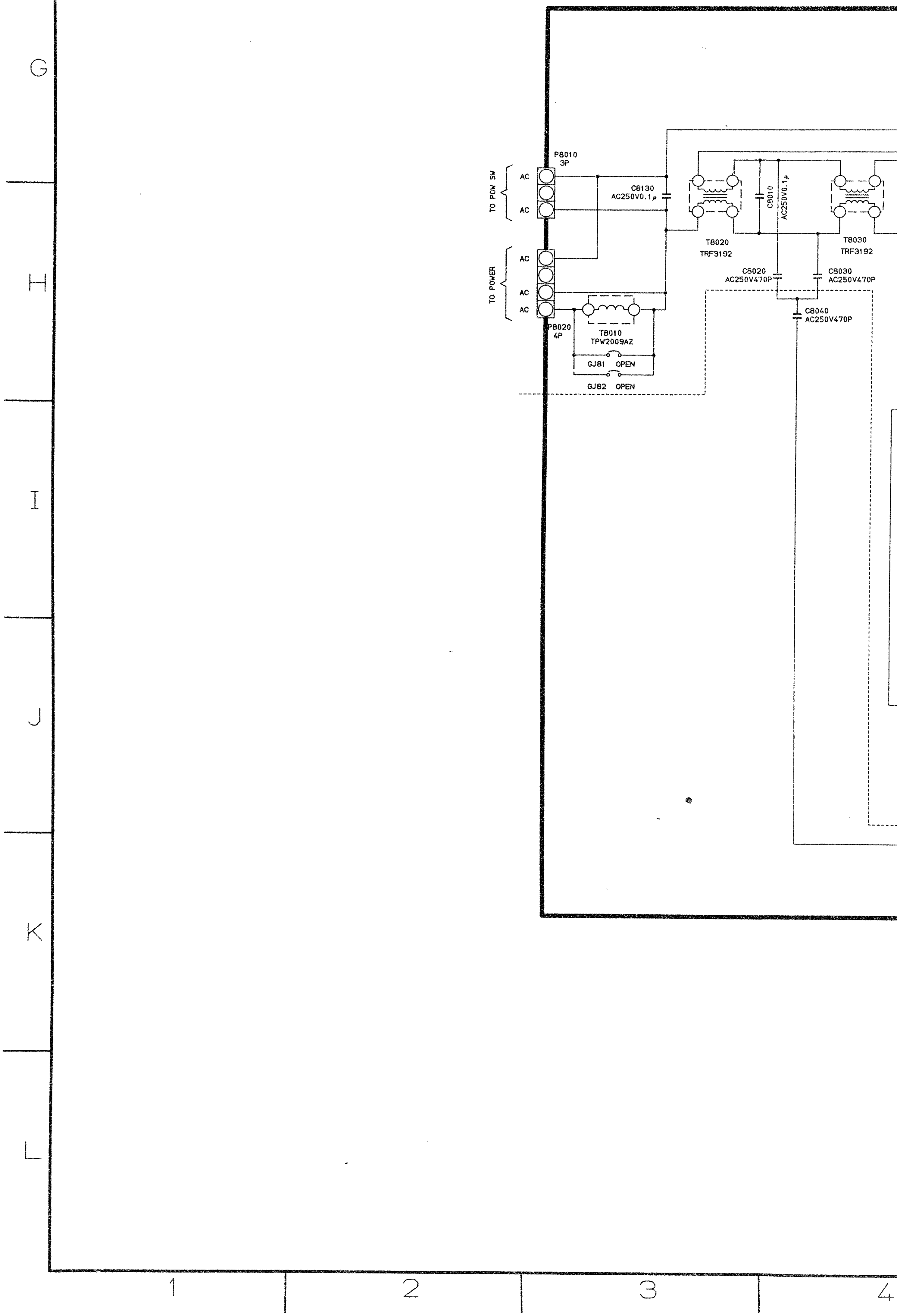

TO A/V
CS2
E3-DET
SS2
LS2
RS2
PV15A
10P
SA07
MENU
RA78
68K
RB11
10K
RB10
100
83S
8-2
GJ01
SHORT
LV49
KETSU
GJ02
SHORT
RV61 680
RV60 680
CV46
3300
CV47
3300
CV48
1000P
LV47
PL-1
PV40
VIDEO3
V
L/MONO
R
TO SIGNAL
R
R
GND
GND
L
L
GND
GND
E3-DET
EXT SP SW
H/P MUTE
P605A
11P
L6101
TEM2011
C6101
0.01
C6102
0.01
R690
1/2W390
R688
1/2W390
C6104
OPEN
C6103
OPEN
P661
R
R
GND
GND
L
L
GND
GND
EXT
P603A
9P
TO SIGNAL
POW2
+5V-2
GND
+5V-1
GND
P807A
5P
SR800
DG5D1-0(M)-2
D8510
MTZJ12A
Q8520
2SC1815Y
D8520
MTZJ12A
R8510
47K
D8530
MTZJ5.6B
Q8510
RN1001
LIVE AREA
T8030
TRF3192
C8030
AC250V470P
C8040
AC250V470P
D821
RBV-406M
orD3SB60
C8050
AC250V4700
L8130
20μ2.5A
C8060
AC250V4700
C8070
450V100μ
(24086072)
L8140
20μ2.5A
F803
T1A/250V
C8080
0.01μ630V
R8040
3W47K
D822
RUIP
T864
TPW3431AR
C8530
500V470PF
F802
T3.15A/250V
D8600
FML-G12S
L8510
TEM2011
C8520
35V6800μ
L8520
20μ
R8560
10K
L8530
20μ
35

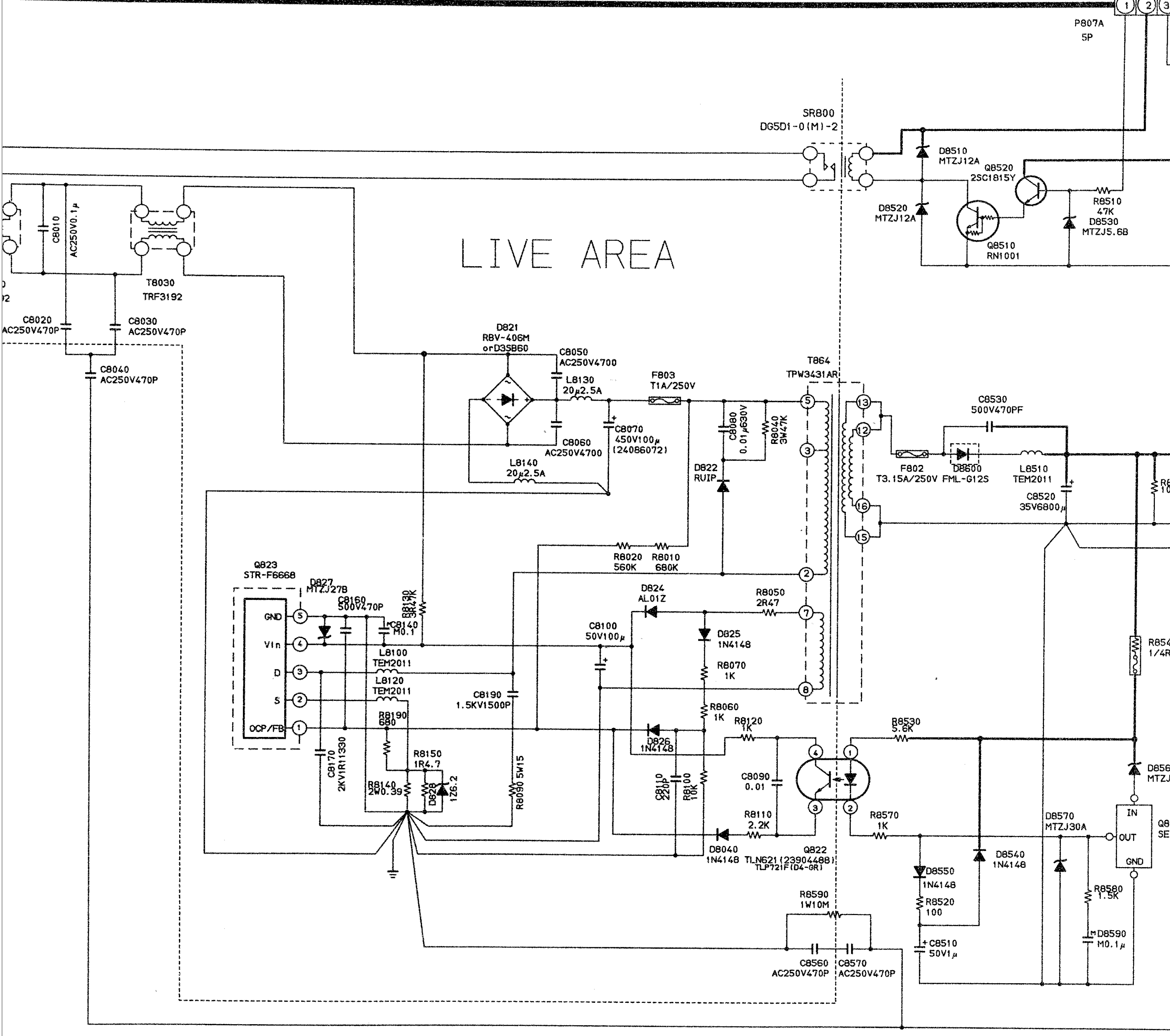

LIVE A
TO POW SW
AC
AC
P8030
3P
TO AUDIO POW
AC
AC
P8040
3P
T8050
TRF3192
T8060
TRF3192
C8400
AC250V0.1μ
D832
LN1WBA60
orRBV406
F805
T0.63A/250V
C8450
KETSU
R8202
KETSU
C8440
450V47μ
T8040
TPW1562AZ
SR810
DG5D1-0(M)-2
C8370
AC250V470P
C8380
AC250V470P
C8390
AC250V470P
C8430
AC250V1000P
C8491
AC250V1000P
D829
S1WBA20
D830
1N4148
Q824
PQ05RD11
IN
OUT
GND
SW
C8420
16V47μ
C8410
35V470μ
R8370
2.2K
D831
MTZJ5.6B
SIGNAL
L
GND
GND
E3-DET
EXT SP SW
H/P MUTE
P605A
11P
R
R
GND
GND
L
L
GND
GND
EXT SP SW
P603A
9P
TO BACK-T
TO SIGNAL
POW2
+5V-2
GND
+5V-1
GND
P807A
5P
R8510
47K
D8530
MTZJ5.6B
L8520
20μ
26.6
R8560
10K
L8530
20μ
C8540
35V6800μ
C8550
OPEN
D8580
MTZJ39A
JP
SHORT
JP
SHORT
C660
50V470μ
Q621
TA8200AH
CENTER AMP
GND
FIL
VCC
GND
MUTE
0
26.6
0
D625
1N4148
OR 1SS131
D626
1N4148
OR 1SS131
C623
25V47μ
C624
50V10μ
C625
50V10μ
D621
1N4148
OR 1SS131
D622
1N4148
OR 1SS131
C626
25V47μ
C627
25V47μ
C628
25V47μ
D623
1N4148 OR 1SS131
D624
1N4148 OR 1SS131
C668
50V4.7μ
R666
47K
C661
M6800P
R664
18K
R661
27K
C662
M2700
R662
6.8K
R623
2.2
C629
M0.12
C630
M0.12
R624
2.2
C631
35V1000μ
C632
35V1000μ
R633
D645


LIVE AREA
D832
LN1WBA60
orRBV406
F805
T0.63A/250V
C8495
630V0.033
T865
TPW3418AM
D835
AG01
R8620
1/2FR2
C8494
100V47μ
R8610
1R3.9K
C8450
KETSU
R8201
3R39K
R8202
KETSU
L8160
ZBF253D
L8170
ZBF253D
C8440
450V47μ
C8480
KETSU
D841
RU1P
C8470
1KV180
Q825
MIP0224SY
R8600
33K
D842
MTZJ18A
D843
MTZJ18A
D833
AG01A
C8493
M0.1
C8490RETSU
Z823
PRT5000
D834
SFSS4
C8270
35V6800μ
L8540
20μ2.5A
L8560
20μ2.5A
C8290
16V330μ
R8240
3.3K(1%)
R8052
B2k
5V ADJ
R8250
3.3K(1%)
Z870
PRT4000
D845
1Z6.2
D846
ERB12-01
TP801
5V ADJ
GND
TP802
R8581
150
R8280
2.2k
C8300
50V10μ
C8492
25V47μ
R8200
62
Q826
TLN621(GRL-LF2)
TLN721F(D4-GRL,M)
C8430
AC250V1000P
C8491
AC250V1000P
R8360
OPEN
C8360
OPEN
Q821
TL431CLPB
R8261
OPEN
R8260
6.8K(1%)
R8170
1k
Q836
2SA1012Y
R8160
1R100
Q838
RN1201
C8340
M0.1μ


C660
50V470μ
AMP
MUTE
Q641
TA8200AH
REAR AMP
GND
FIL
VCC
GND
MUTE
0
26.6
0
D623
1N4148 OR 1SS131
D624
1N4148 OR 1SS131
D645 1N4148
OR 1SS131
D646
1N4148
OR 1SS131
C643
25V47μ
C644
50V10μ
C645
50V10μ
D641
1N4148
OR 1SS131
D642
1N4148
OR 1SS131
C646
25V47μ
C647
25V47μ
C648
25V47μ
D643
1N4148
OR 1SS131
D644
1N4148
OR 1SS131
R643
2.2
C649
M0.12
C650
M0.12
R644
2.2
C651
35V1000μ
C652
35V1000μ
R624
2.2
C632
35V1000μ
R633
22K
M0.12


R8610
1R3.9K
D842
MTZJ18A
D843
MTZJ18A
0
5A
240
(1%)
052
2k
DJ
250
(1%)
50
N
61
N
R8260
6.8K(1%)
TP801
5V ADJ
GND
TP802
P
Z670
PRT4000
D845
1Z6.2
D846
ERB12-01
R8170
1k
Q836
2SA1012Y
R8160
1R100
Q838
RN1201
C8340
M0.1μ
M
+5V-4
+5V-5
GND
TEXT RESET
+32V
NC
EPG POWER
TO SIGNAL
P806A
7P
C
D
E
F
G
H


G
H
I
J
K
L
P8010
3P
TO POW SW
AC
AC
C8130
AC250V0.1μ
C8010
AC250V0.1μ
T8020
TRF3192
T8030
TRF3192
TO POWER
AC
AC
AC
P8020
4P
C8020
AC250V470P
C8030
AC250V470P
C8040
AC250V470P
T8010
TPW2009AZ
GJ81 OPEN
GJ82 OPEN
1
2
3
4

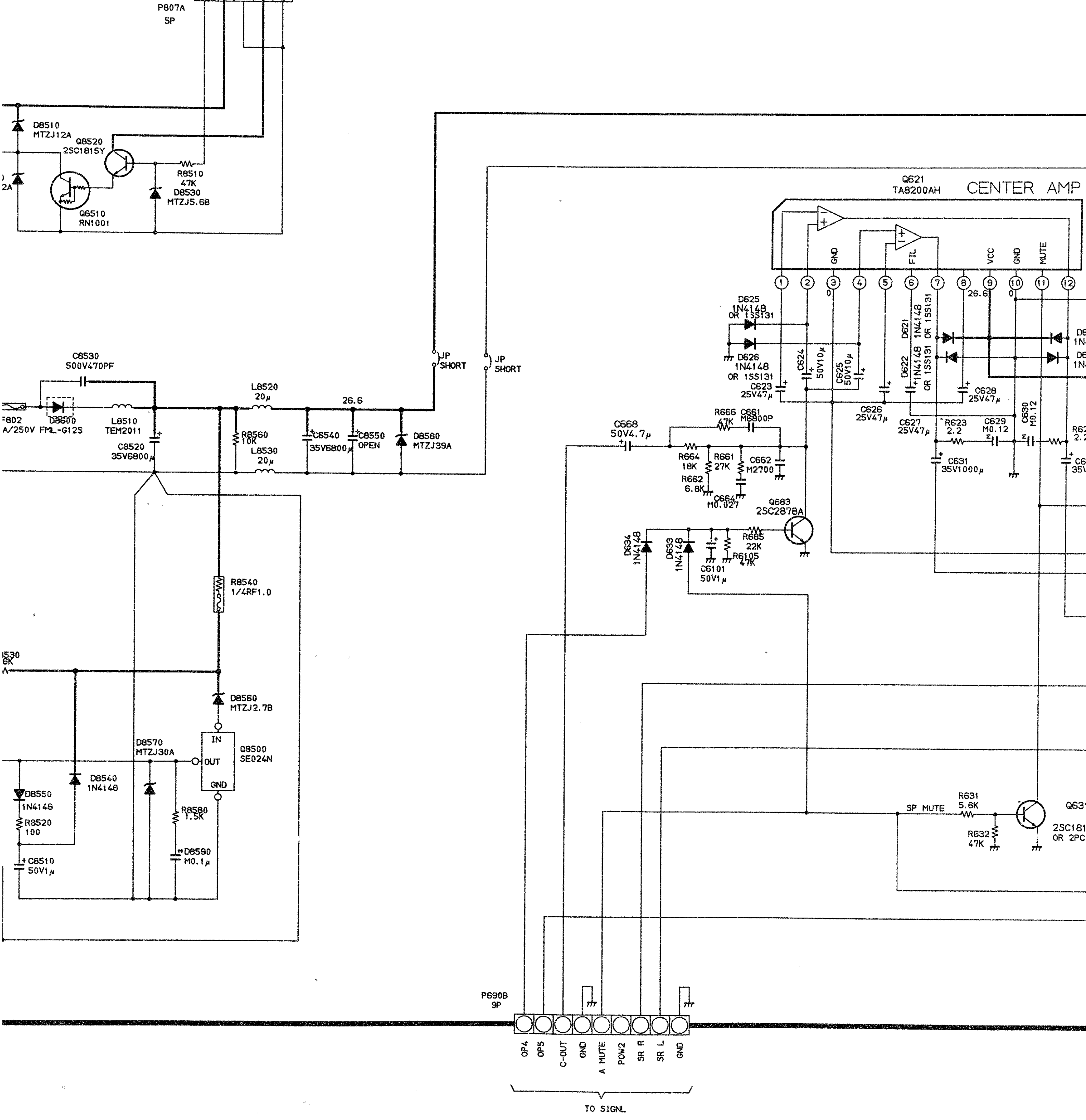

P807A
5P
SR800
DG5D1-0(M)-2
D8510
MTZJ12A
Q8520
2SC1815Y
D8520
MTZJ12A
Q8510
RN1001
R8510
47K
D8530
MTZJ5.6B
C8010
AC250V0.1μ
T8030
TRF3192
LIVE AREA
C8020
AC250V470P
C8030
AC250V470P
C8040
AC250V470P
D821
RBV-406M
orD3SB60
C8050
AC250V4700
L8130
20μ2.5A
F803
T1A/250V
C8060
AC250V4700
C8070
450V100μ
(24086072)
L8140
20μ2.5A
C8080
0.01μ630V
R8040
3W47K
D822
RU1P
T864
TPW3431AR
C8530
500V470PF
F802
T3.15A/250V
D8500
FML-G12S
L8510
TEM2011
C8520
35V6800μ
R8020
560K
R8010
680K
Q823
STR-F6668
D827
MTZJ27B
C8160
500V470P
R8130
3R47K
C8140
M0.1
GND
Vin
D
S
OCP/FB
L8100
TEM2011
L8120
TEM2011
R8190
680
C8170
2KV1R11330
R8150
1R4.7
R8140
2W0.39
D628
1Z6.2
C8190
1.5KV1500P
R8090 5W15
D824
AL01Z
R8050
2R47
C8100
50V100μ
D825
1N4148
R8070
1K
R8060
1K
R8120
1K
D826
1N4148
C8110
220P
R8100
10K
C8090
0.01
R8110
2.2K
D8040
1N4148
Q822
TLN621(23904488)
TLP721F(D4-GR)
R8530
5.6K
R8570
1K
D8550
1N4148
R8520
100
C8510
50V1μ
D8540
1N4148
D8570
MTZJ30A
R8580
1.5K
D8590
M0.1μ
IN
OUT
GND
R8590
1W10M
C8560
AC250V470P
C8570
AC250V470P

1. RESISTOR Resistance is shown in
carbon resistor,unless
1/2R : Met
1RF : Fuse
K = ±10%

2.CAPACITOR Unless otherwise noted
values more than 1 in p
All capacitors are cera
⊣⊢ Electr

3. The parts indicated with "⚠" have

4. This schematic diagram is the latest
modification notices.


P807A
5P
D8510
MTZJ12A
Q8520
2SC1815Y
R8510
47K
D8530
MTZJ5.6B
Q8510
RN1001
Q621
TA8200AH
CENTER AMP
GND
FIL
VCC
GND
MUTE
26.6
JP
SHORT
JP
SHORT
D625
1N4148
OR 1SS131
D626
1N4148
OR 1SS131
C624
50V10μ
C625
50V10μ
C623
25V47μ
D621
1N4148
OR 1SS131
D622
1N4148
OR 1SS131
C626
25V47μ
C628
25V47μ
C627
25V47μ
R623
2.2
C629
M0.12
C630
M0.12
C631
35V1000μ
C8530
500V470PF
L8520
20μ
26.6
F802
A/250V FML-G12S
D8600
L8510
TEM2011
C8520
35V6800μ
R8560
10K
L8530
20μ
C8540
35V6800μ
C8550
OPEN
D8580
MTZJ39A
C668
50V4.7μ
R666
47K
C661
M6800P
R664
18K
R661
27K
C662
M2700
R662
6.8K
C664
M0.027
Q683
2SC2878A
D634
1N4148
D633
1N4148
R685
22K
R6105
47K
C6101
50V1μ
R8540
1/4RF1.0
D8560
MTZJ2.7B
IN
OUT
GND
Q8500
SE024N
D8570
MTZJ30A
D8540
1N4148
D8550
1N4148
R8520
100
R8580
1.5K
D8590
M0.1μ
C8510
50V1μ
SP MUTE
R631
5.6K
R632
47K
2SC181
OR 2PC
P690B
9P
OP4
OP5
C-OUT
GND
A MUTE
POW2
SR R
SR L
GND
TO SIGNL

1. RESISTOR Resistance is shown in ohm [K = 1.000, M = 1.000.000]. All resistors sre 1/6W and 5% tolerance carbon resistor.unless otherwise noted as the following marks.

1/2R : Metal or Metal oxide of 1/2 watt 1/2S : Solid of 1/2 watt
1RF : Fuse resistor of 1 watt 10W : Cement of 10 watts

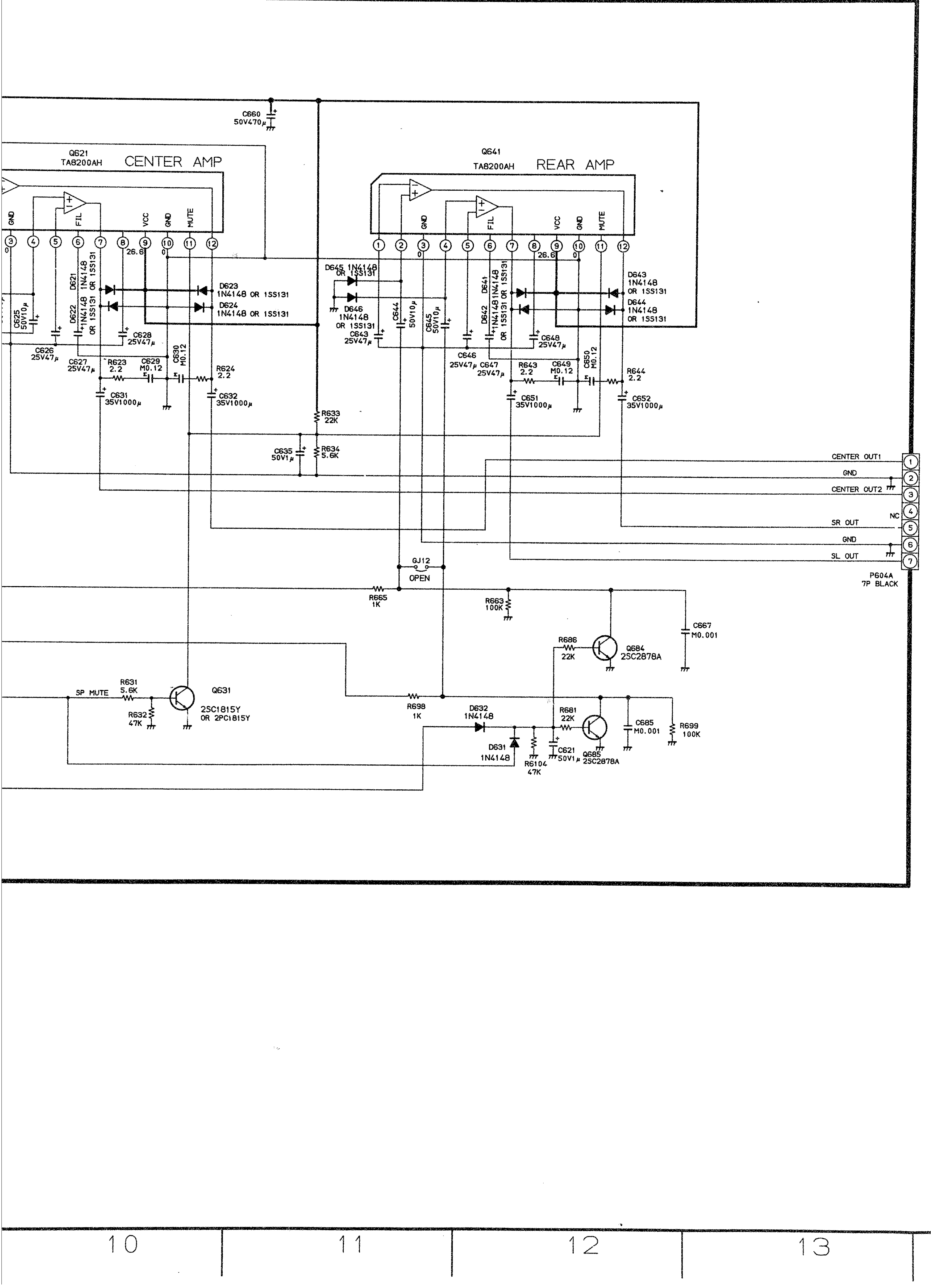
K = ±10% G = ±2% F = ±1%

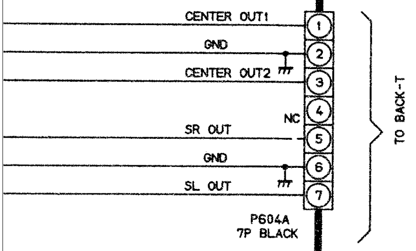
2.CAPACITOR Unless otherwise noted in schematic.all capacitor valuse less than 1 are expressed in μF.and the values more than 1 in pF.
All capacitors are ceramic 50V, unless otherwise noted as the following marks.

⁺|⊢ Electrolitic capacitor ⊣⊢ⓜ Mylar capacitor

3. The parts indicated with "⚠" h ve specialcharacteristics should be replaced with identical parts only.

4. This schematic diagram is the latest the time of copying, so it must be changet in acordance with all informed modification notices.


C660
50V470µ
Q621
TA8200AH
CENTER AMP
Q641
TA8200AH
REAR AMP
GND
FIL
VCC
GND
MUTE
26.6
0
D621 1N4148 OR 1SS131
D622 1N4148 OR 1SS131
D623 1N4148 OR 1SS131
D624 1N4148 OR 1SS131
C625 50V10µ
C626 25V47µ
C627 25V47µ
C628 25V47µ
R623 2.2
C629 M0.12
C630 M0.12
R624 2.2
C631 35V1000µ
C632 35V1000µ
R633 22K
C635 50V1µ
R634 5.6K
D645 1N4148 OR 1SS131
D646 1N4148 OR 1SS131
C643 25V47µ
C644 50V10µ
C645 50V10µ
C646 25V47µ
C647 25V47µ
D641 1N4148 OR 1SS131
D642 1N4148 OR 1SS131
D643 1N4148 OR 1SS131
D644 1N4148 OR 1SS131
C648 25V47µ
R643 2.2
C649 M0.12
C650 M0.12
R644 2.2
C651 35V1000µ
C652 35V1000µ
CENTER OUT1
GND
CENTER OUT2
NC
SR OUT
GND
SL OUT
P604A
7P BLACK
GJ12
OPEN
R665 1K
R663 100K
C667 M0.001
R686 22K
Q684 2SC2878A
SP MUTE
R631 5.6K
R632 47K
Q631
2SC1815Y OR 2PC1815Y
R698 1K
D632 1N4148
D631 1N4148
R6104 47K
R681 22K
C621 50V1µ
Q685 2SC2878A
C685 M0.001
R699 100K
10
11
12
13


CENTER OUT1
GND
CENTER OUT2
NC
SR OUT
GND
SL OUT
1
2
3
4
5
6
7
P604A
7P BLACK
TO BACK-T

AUDIO/POWER2
FRONT EPG/POW
50PJ98B/G
61PJ98B/G 5/6
PK2981

SCHEMATIC DIAGRAM MODEL : 50PJ98B / 50PJ98G (6/6)

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 3. Do not degrade the safety of the receiver through improper servicing.

030-9915

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position. Set other controls for best picture.

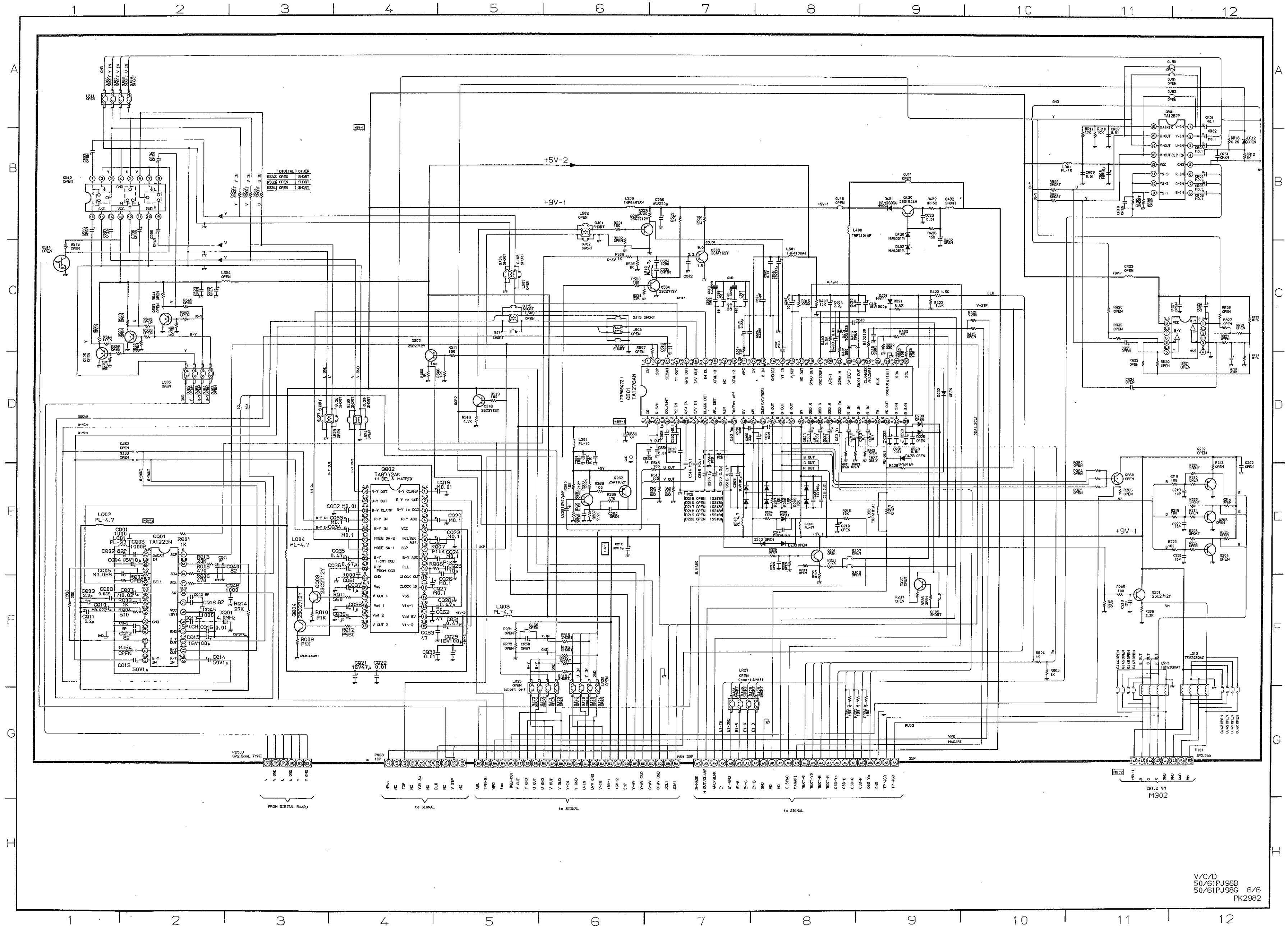
NOTES:

1. D.C. resistance value of a principal transformer is shown in this schematic diagram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

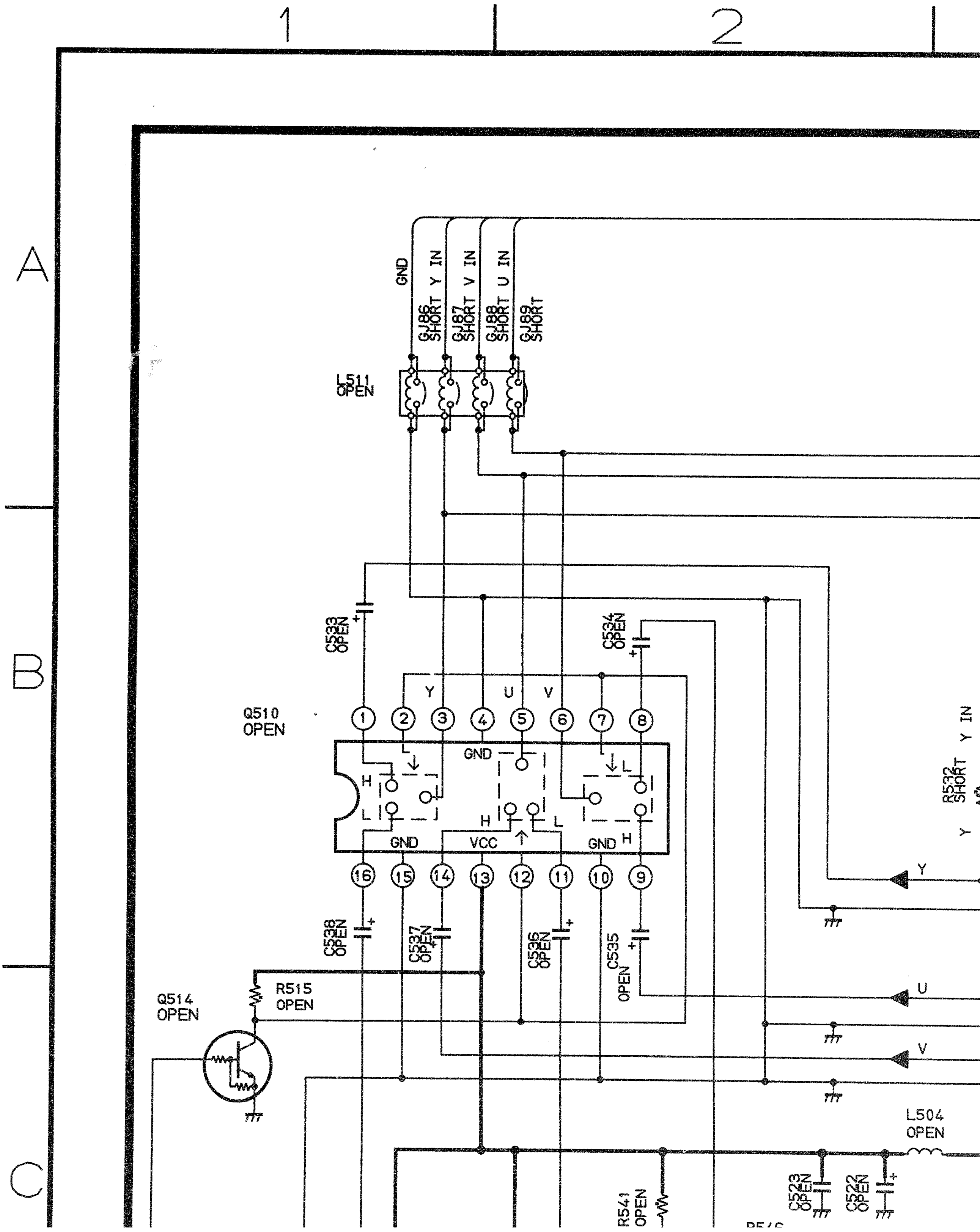
1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH, and the values less than 1 in H.


1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H
+5V-2
+9V-1
QS01
TA1276AN
Q002
TA8772AN
1H DEL & MATRIX
Q001
TA1223N
QR01
TA1287P
LQ02
PL-4.7
LQ04
PL-4.7
LQ03
PL-4.7
LS91
L400
PD509
PV33
PS01
P181
FROM DIGITAL BOARD
to SIGNAL
to SIGNAL
to SIGNAL
CRT.D VM
M902
V/C/D
50/61PJ98B
50/61PJ98G 6/6
PK2982

SCHEMATIC DIAGRAM   MODEL : 50PJ

CAUTION: The international hazard symbols "⚠" in the schematic diagram
ponents which have special characteristics important for safety and should
those in the original circuit or specified in the parts list. The mounting positio
with originals. Before replacing any of these components, read carefully the
3. Do not degrade the safety of the receiver through improper servicing.

030-9915

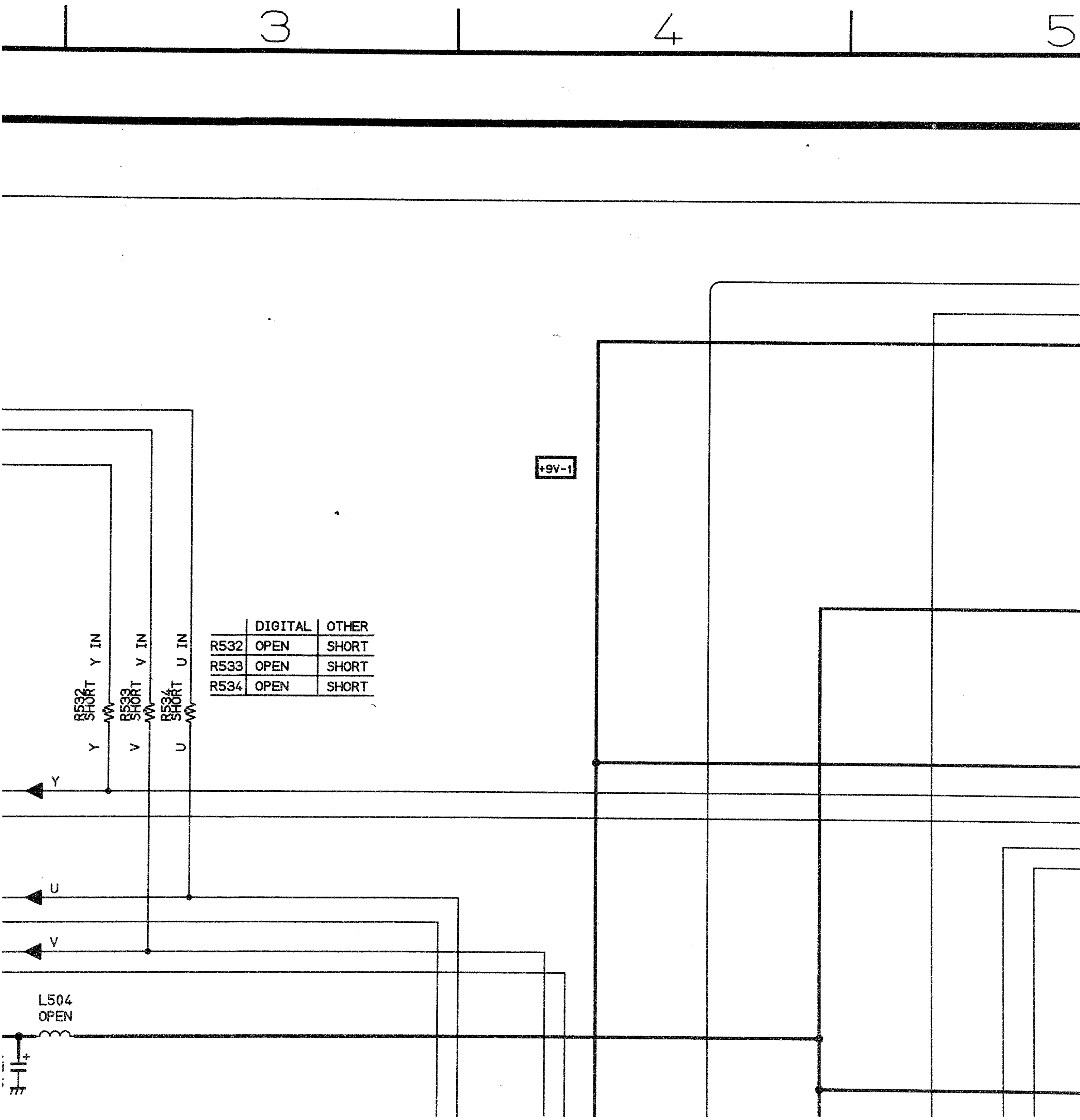

1
2
A
B
C
GND
Y IN
V IN
U IN
GJ86 SHORT
GJ87 SHORT
GJ88 SHORT
GJ89 SHORT
L511 OPEN
C533 OPEN
C534 OPEN
Q510 OPEN
Y
U
V
GND
H
L
VCC
GND
H
① ② ③ ④ ⑤ ⑥ ⑦ ⑧
⑯ ⑮ ⑭ ⑬ ⑫ ⑪ ⑩ ⑨
C538 OPEN
C537 OPEN
C536 OPEN
C535 OPEN
Q514 OPEN
R515 OPEN
R532 SHORT
Y IN
Y
Y
U
V
L504 OPEN
R541 OPEN
C523 OPEN
C522 OPEN

50PJ98B / 50PJ98G (6/6)

c diagram and the parts list designate com-
ıd should be replaced only with types identical to
ing position of replacements is to be identical
refully the PRODUCT SAFETY NOTICE on page
vicing.

OBSERVATION OF VOLTAGES ANI

1. Voltages read with VTVM from p
volts, colour bar signal. Voltages
2. All waveforms are taken using a w
3. Waveforms are taken using a sta
4. Make sure that CONTRAST anc
BRIGHTNESS control is almost in
picture.


3
4
5
+9V-1
Y IN
V IN
U IN
R532 SHORT
R533 SHORT
R534 SHORT
Y
V
U
Y
U
V
L504
OPEN

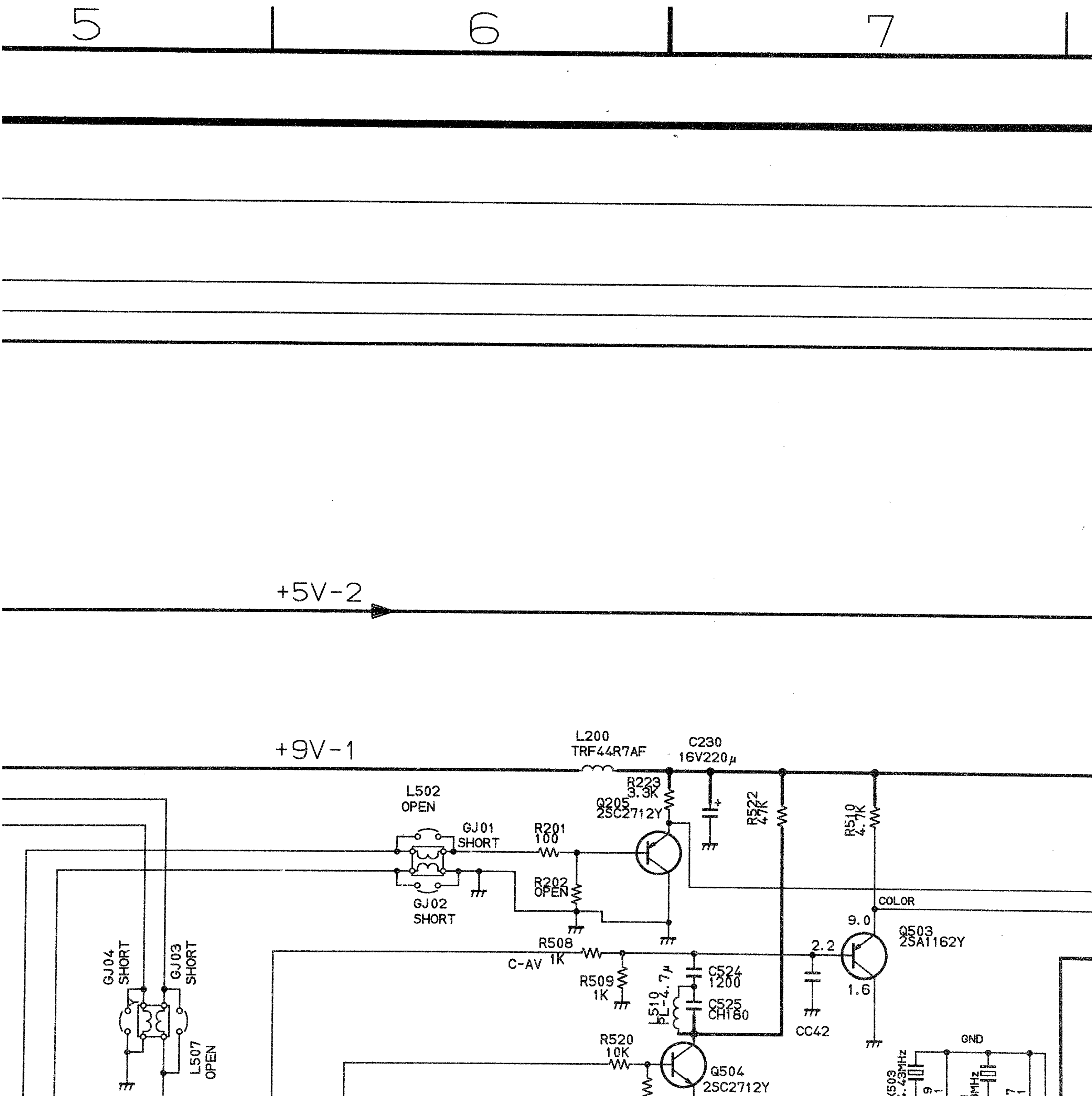
	DIGITAL	OTHER
R532	OPEN	SHORT
R533	OPEN	SHORT
R534	OPEN	SHORT

GES AND WAVEFORMS

M from point shown to chassis ground, line voltage 220
Voltages reading may vary ±20%.
using a wide band oscilloscope and a low capacity probe.
sing a standard colour bar signal.
RAST and COLOUR controls are in mid position and
almost in maximum position. Set other controls for best

NOTES:

1. D.C. resistance
gram. These ar
2. The circuits are
3. ⊖ : Solder li



5
6
7
+5V-2
+9V-1
L200
TRF44R7AF
C230
16V220μ
R223
3.3K
Q205
2SC2712Y
R522
47K
R510
4.7K
L502
OPEN
GJ01
SHORT
GJ02
SHORT
R201
100
R202
OPEN
COLOR
9.0
Q503
2SA1162Y
2.2
1.6
R508
1K
C-AV
R509
1K
C524
1200
L510
FL-4.7μ
C525
CH180
CC42
GJ04
SHORT
GJ03
SHORT
L507
OPEN
R520
10K
Q504
2SC2712Y
GND
X503
4.43MHz

esistance value of a principal transformer is shown in this schematic dia-
These are measured for separated from the circuit.
rcuits are subject to change without notice.
Solder links.

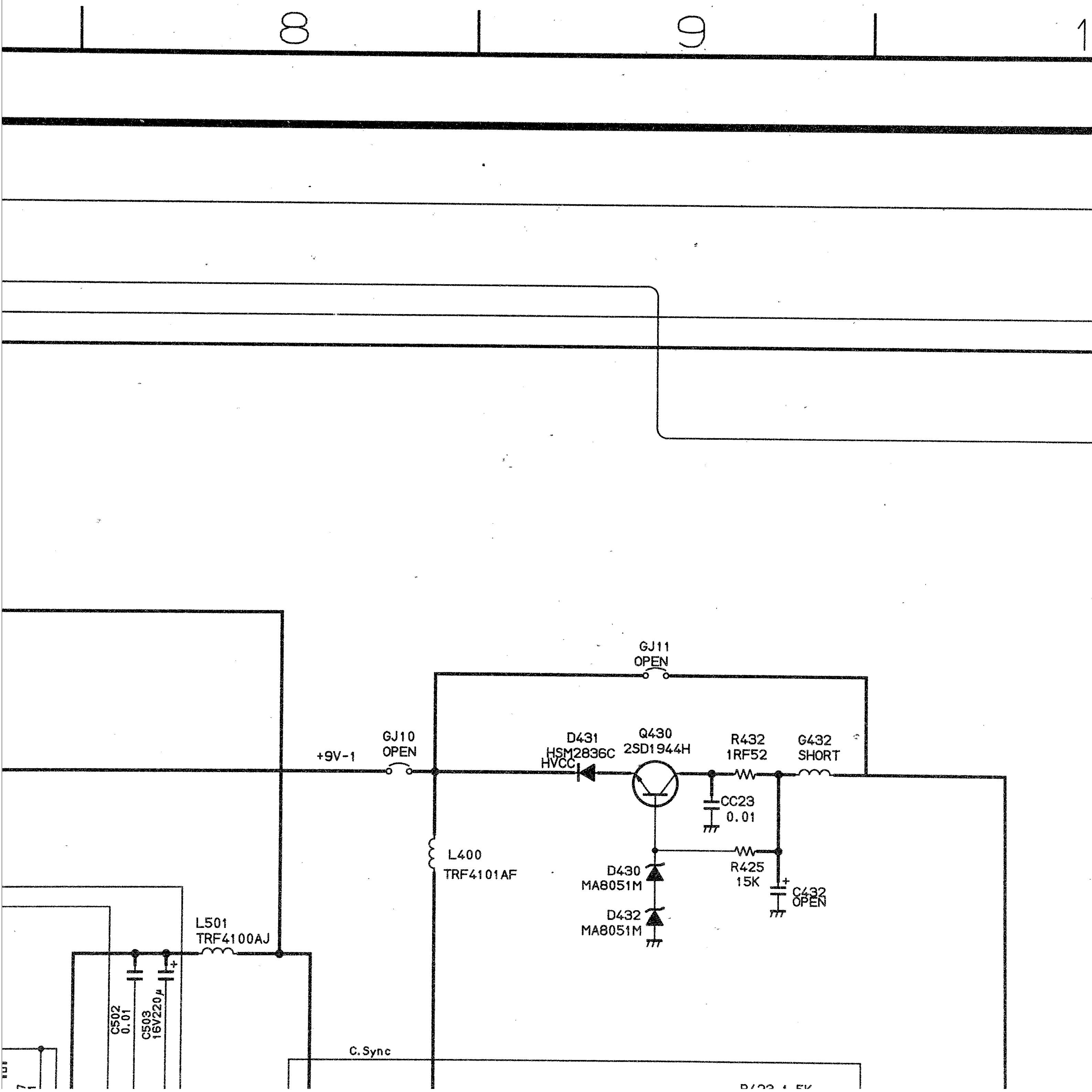
E

V

1.

2.

3.

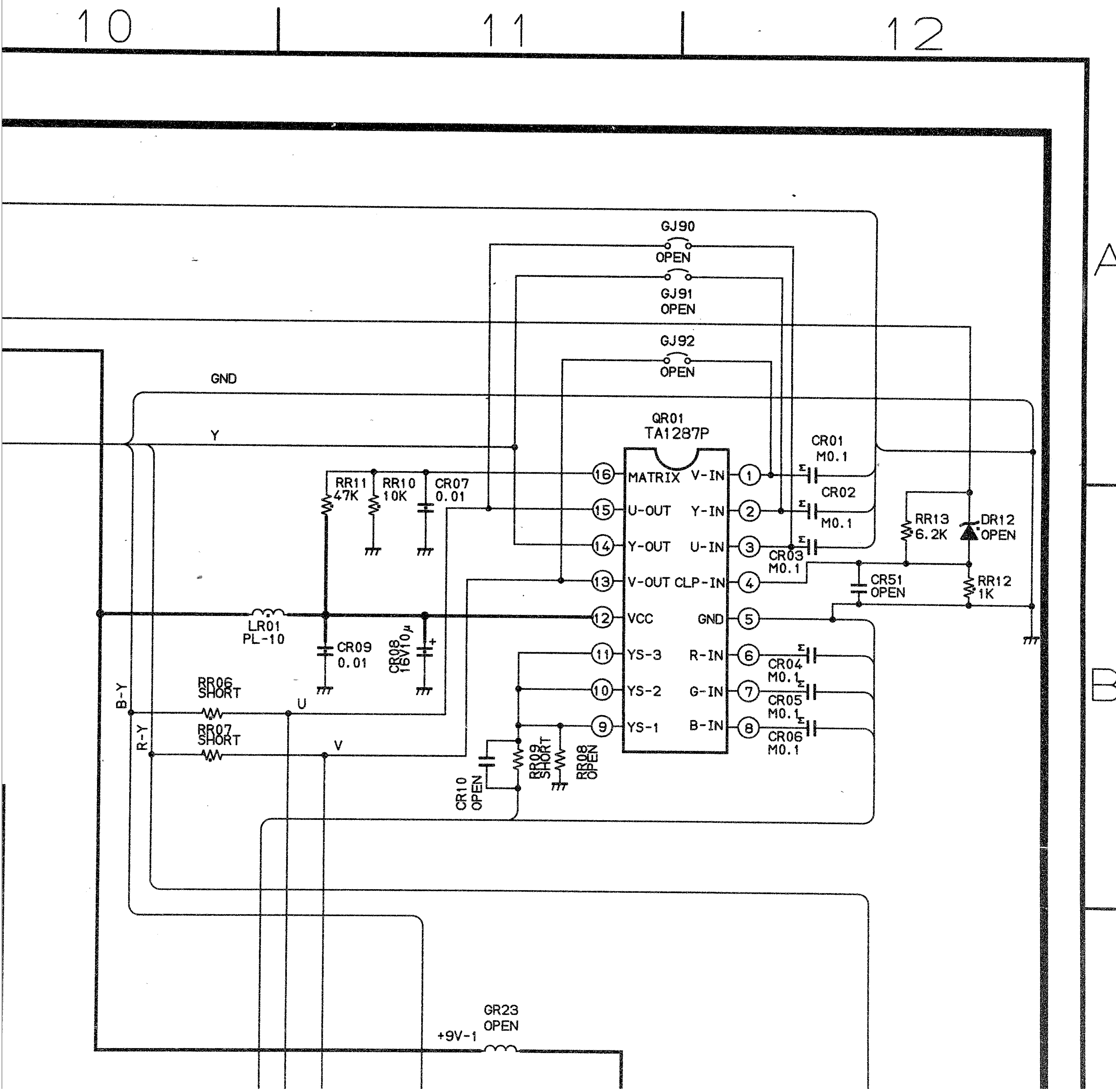


8
9
1
GJ11
OPEN
+9V-1
GJ10
OPEN
D431
HSM2836C
HVCC
Q430
2SD1944H
R432
1RF52
G432
SHORT
CC23
0.01
L400
TRF4101AF
D430
MA8051M
D432
MA8051M
R425
15K
C432
OPEN
L501
TRF4100AJ
C502
0.01
C503
16V220μ
C.Sync

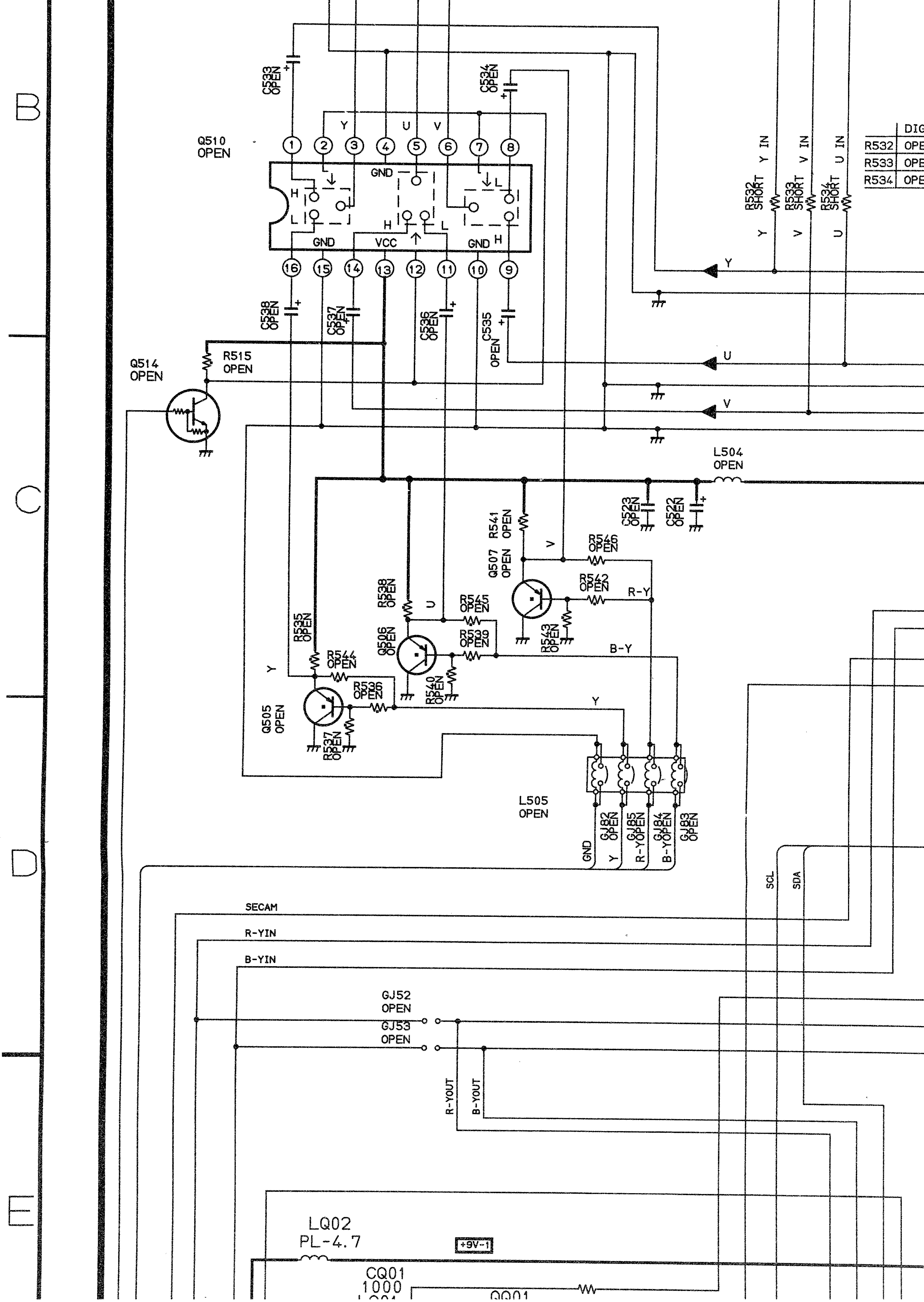
EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

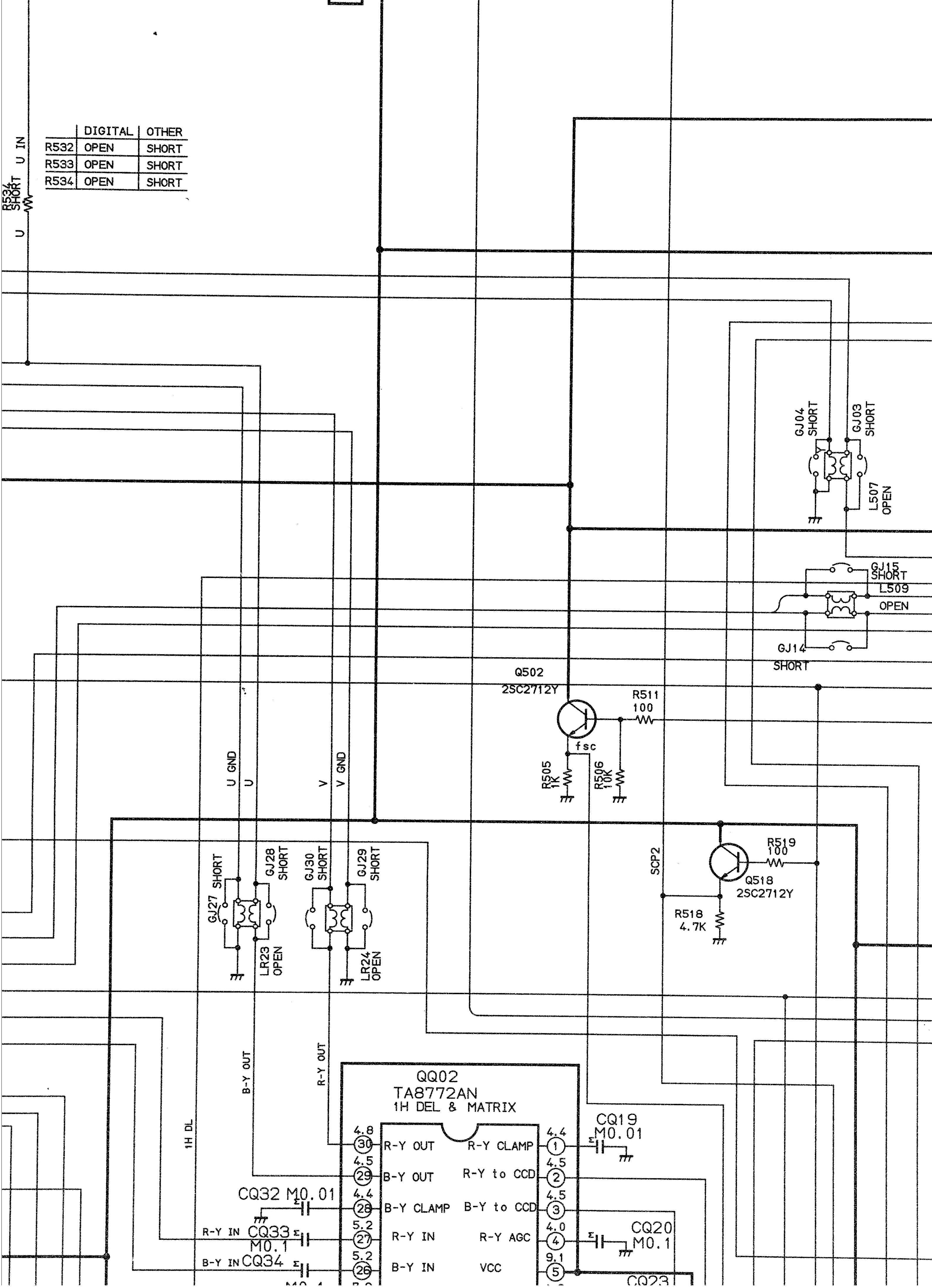
1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH, and the values less than 1 in H.



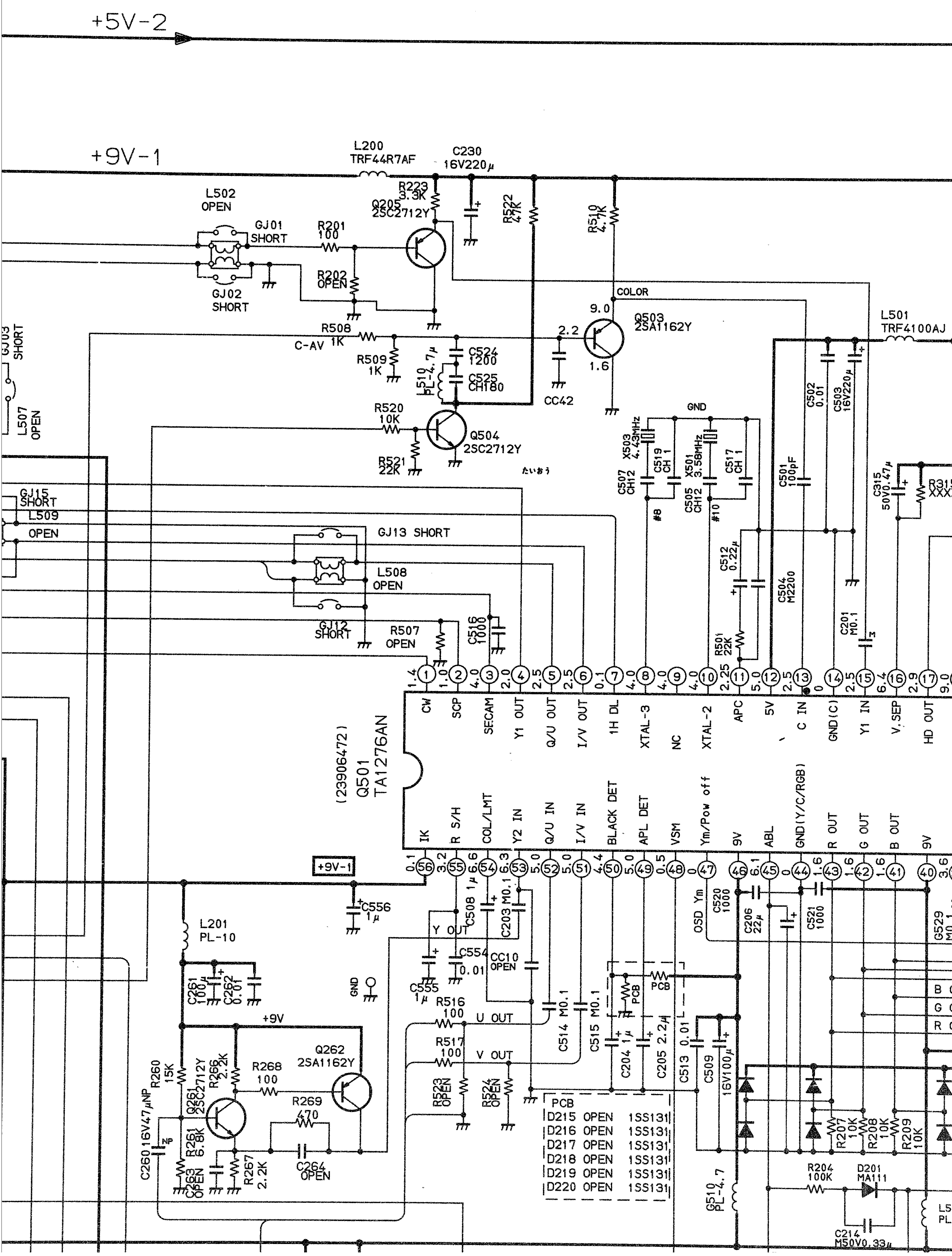
10
11
12
A
B
GJ90
OPEN
GJ91
OPEN
GJ92
OPEN
GND
Y
QR01
TA1287P
16 MATRIX
15 U-OUT
14 Y-OUT
13 V-OUT
12 VCC
11 YS-3
10 YS-2
9 YS-1
V-IN 1
Y-IN 2
U-IN 3
CLP-IN 4
GND 5
R-IN 6
G-IN 7
B-IN 8
CR01
M0.1
CR02
M0.1
CR03
M0.1
CR04
M0.1
CR05
M0.1
CR06
M0.1
RR11
47K
RR10
10K
CR07
0.01
LR01
PL-10
CR09
0.01
CR08
16V10μ
RR13
6.2K
DR12
OPEN
CR51
OPEN
RR12
1K
B-Y
R-Y
RR06
SHORT
RR07
SHORT
U
V
CR10
OPEN
RR09
SHORT
RR08
OPEN
GR23
OPEN
+9V-1


B
C
D
E
C533
OPEN
C534
OPEN
Q510
OPEN
Y
U
V
GND
H
L
GND
VCC
GND
H
C538
OPEN
C537
OPEN
C536
OPEN
C535
OPEN
Q514
OPEN
R515
OPEN
DIG
R532 OPE
R533 OPE
R534 OPE
Y IN
V IN
U IN
R532
SHORT
R533
SHORT
R534
SHORT
Y
V
U
Y
U
V
L504
OPEN
C523
OPEN
C522
OPEN
R541
OPEN
Q507
OPEN
V
R546
OPEN
R542
OPEN
R-Y
R543
OPEN
R538
OPEN
U
R545
OPEN
Q506
OPEN
R539
OPEN
B-Y
R535
OPEN
R544
OPEN
Y
R540
OPEN
R536
OPEN
Y
Q505
OPEN
R537
OPEN
L505
OPEN
GJ82
OPEN
GJ85
OPEN
GJ84
OPEN
GJ83
OPEN
GND
Y
R-Y
B-Y
SCL
SDA
SECAM
R-YIN
B-YIN
GJ52
OPEN
GJ53
OPEN
R-YOUT
B-YOUT
LQ02
PL-4.7
+9V-1
CQ01
1000
QQ01

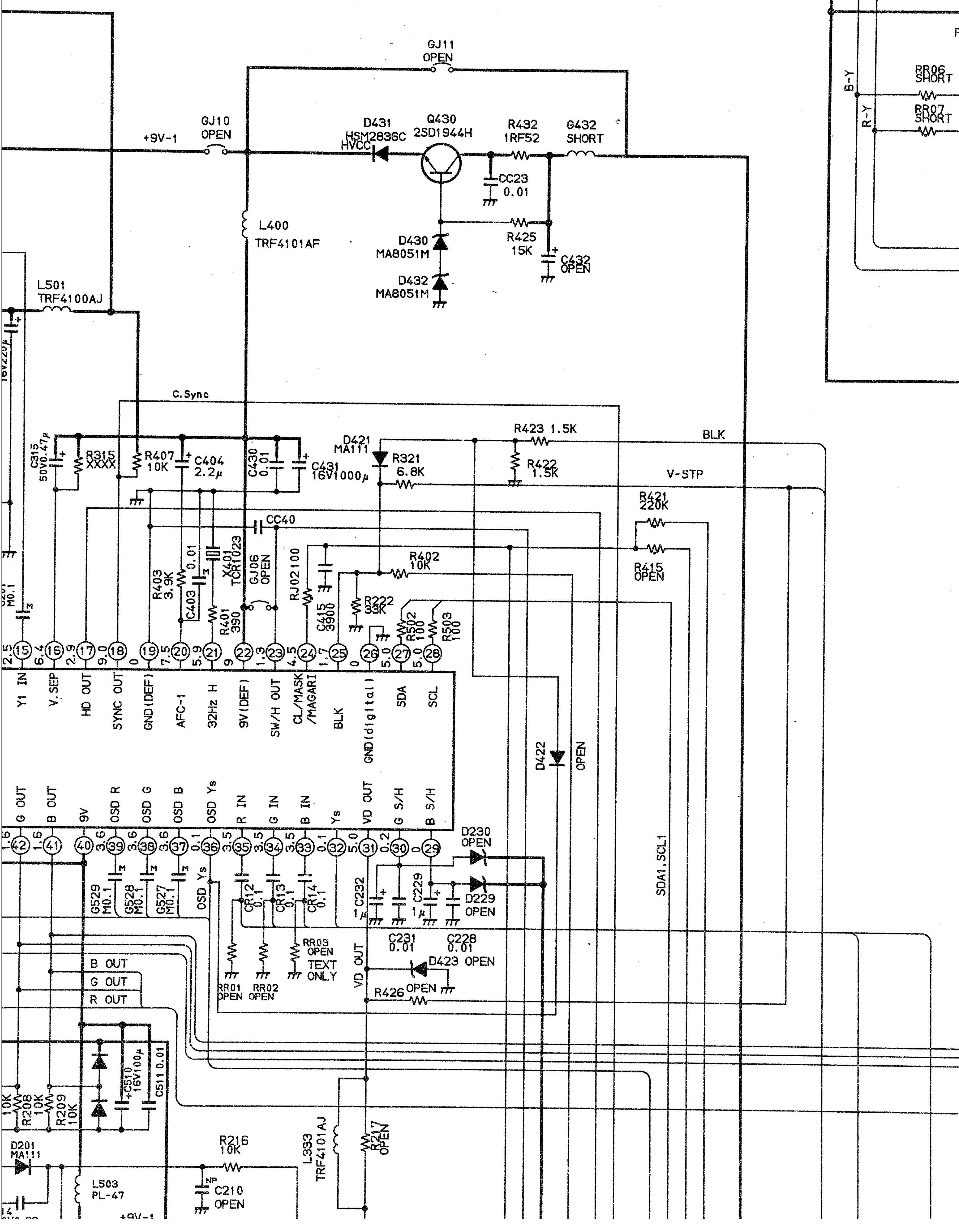
	DIGITAL	OTHER
R532	OPEN	SHORT
R533	OPEN	SHORT
R534	OPEN	SHORT

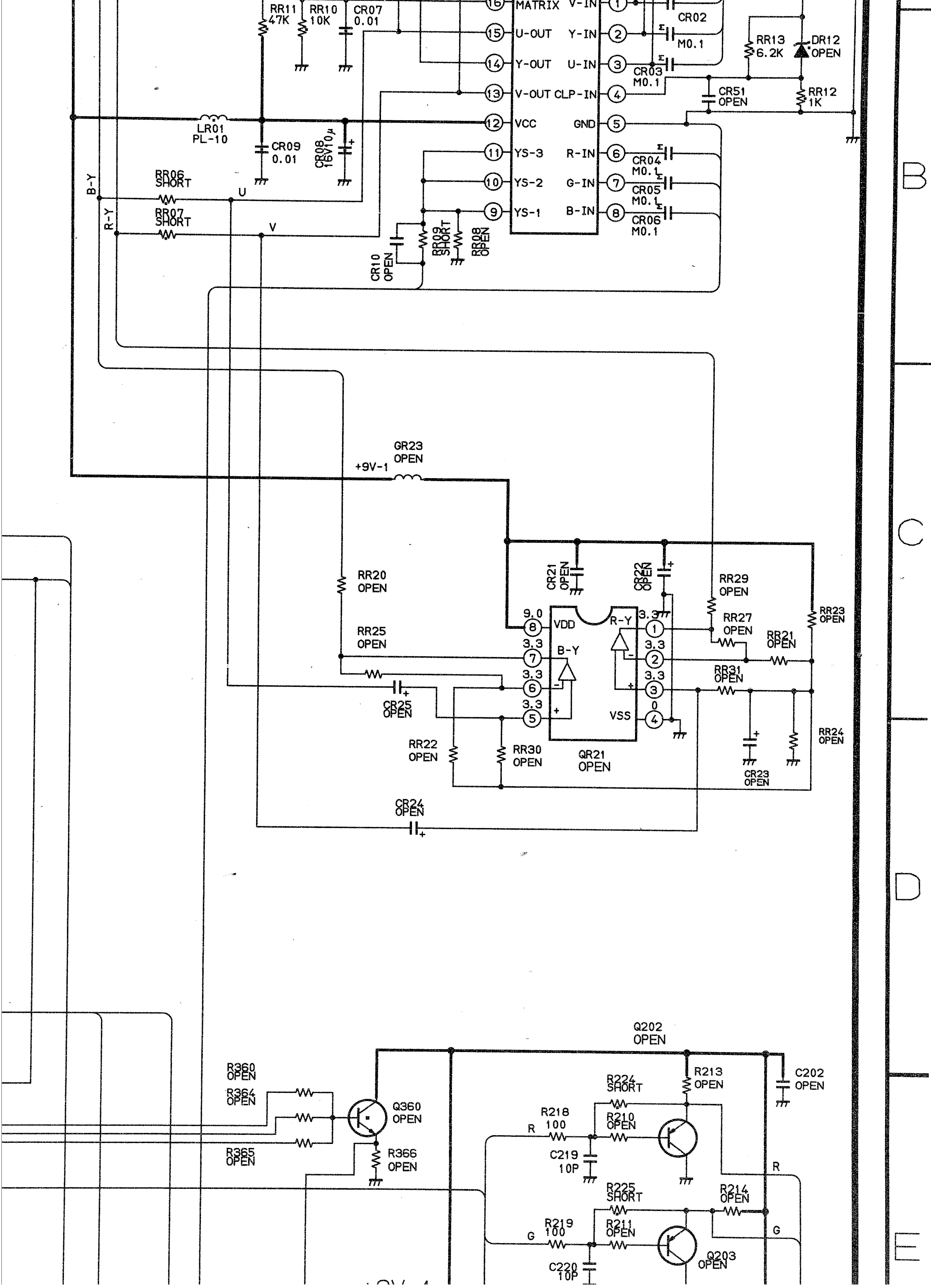


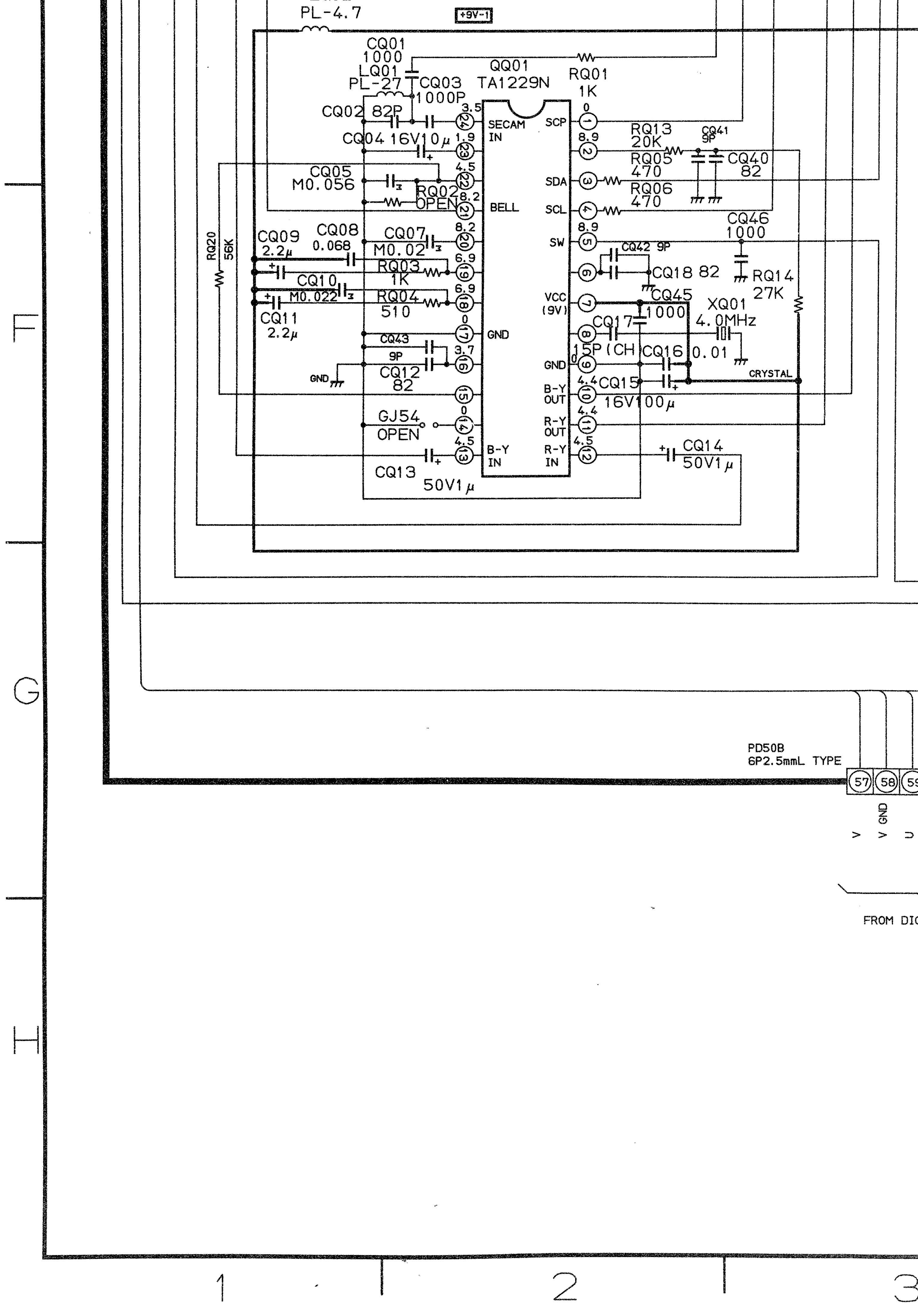
U IN
R534
SHORT
U
GJ04
SHORT
GJ03
SHORT
L507
OPEN
GJ15
SHORT
L509
OPEN
GJ14
SHORT
Q502
2SC2712Y
R511
100
fsc
R505
1K
R506
10K
U GND
U
V
V GND
GJ27
SHORT
GJ28
SHORT
GJ30
SHORT
GJ29
SHORT
LR23
OPEN
LR24
OPEN
SCP2
R519
100
Q518
2SC2712Y
R518
4.7K
B-Y OUT
R-Y OUT
1H DL
QQ02
TA8772AN
1H DEL & MATRIX
4.8
30
R-Y OUT
R-Y CLAMP
4.4
1
CQ19
M0.01
4.5
29
B-Y OUT
R-Y to CCD
4.5
2
CQ32 M0.01
4.4
28
B-Y CLAMP
B-Y to CCD
4.5
3
R-Y IN
CQ33
M0.1
5.2
27
R-Y IN
R-Y AGC
4.0
4
CQ20
M0.1
B-Y IN
CQ34
5.2
26
B-Y IN
VCC
9.1
5
CQ23

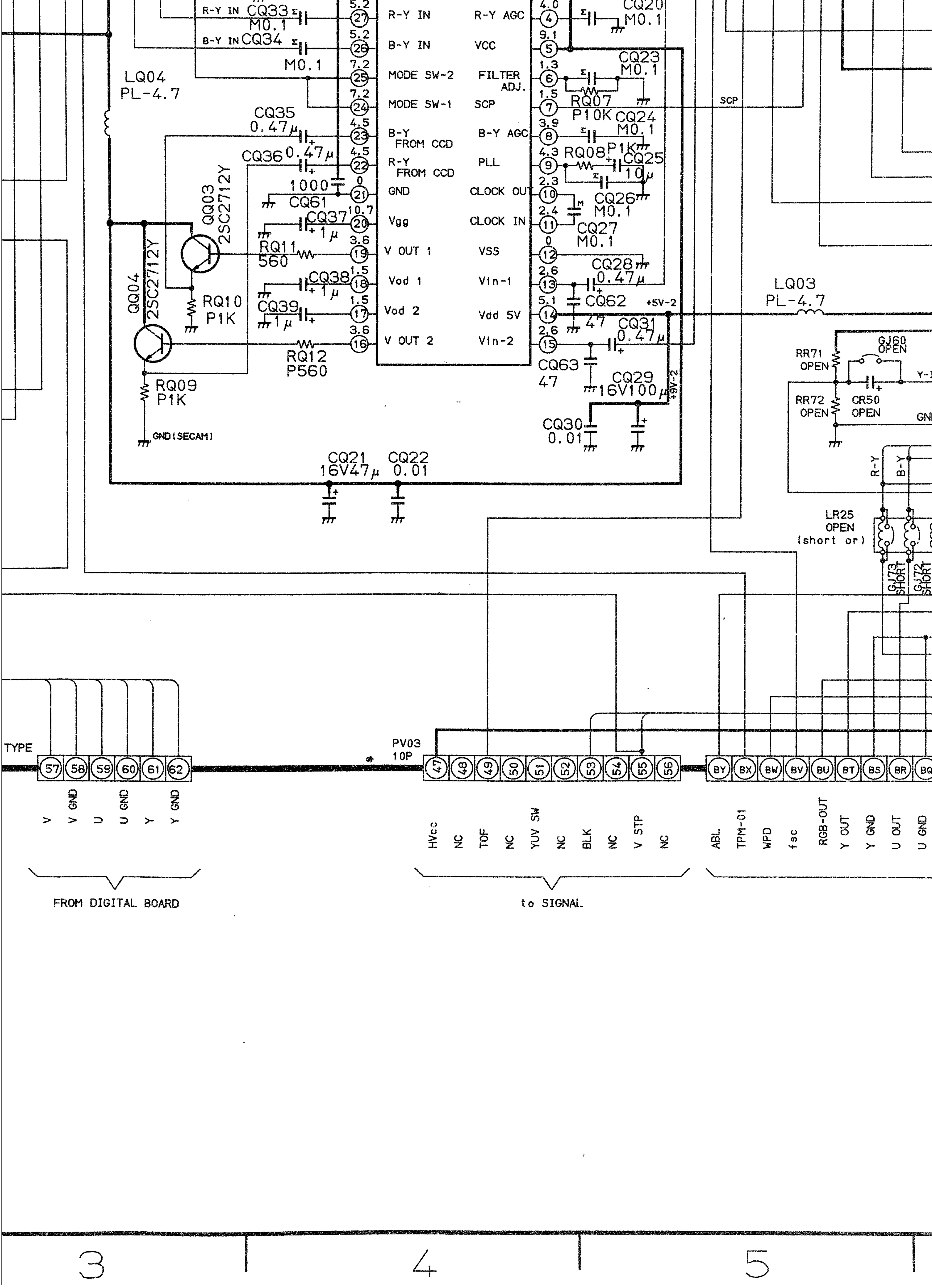


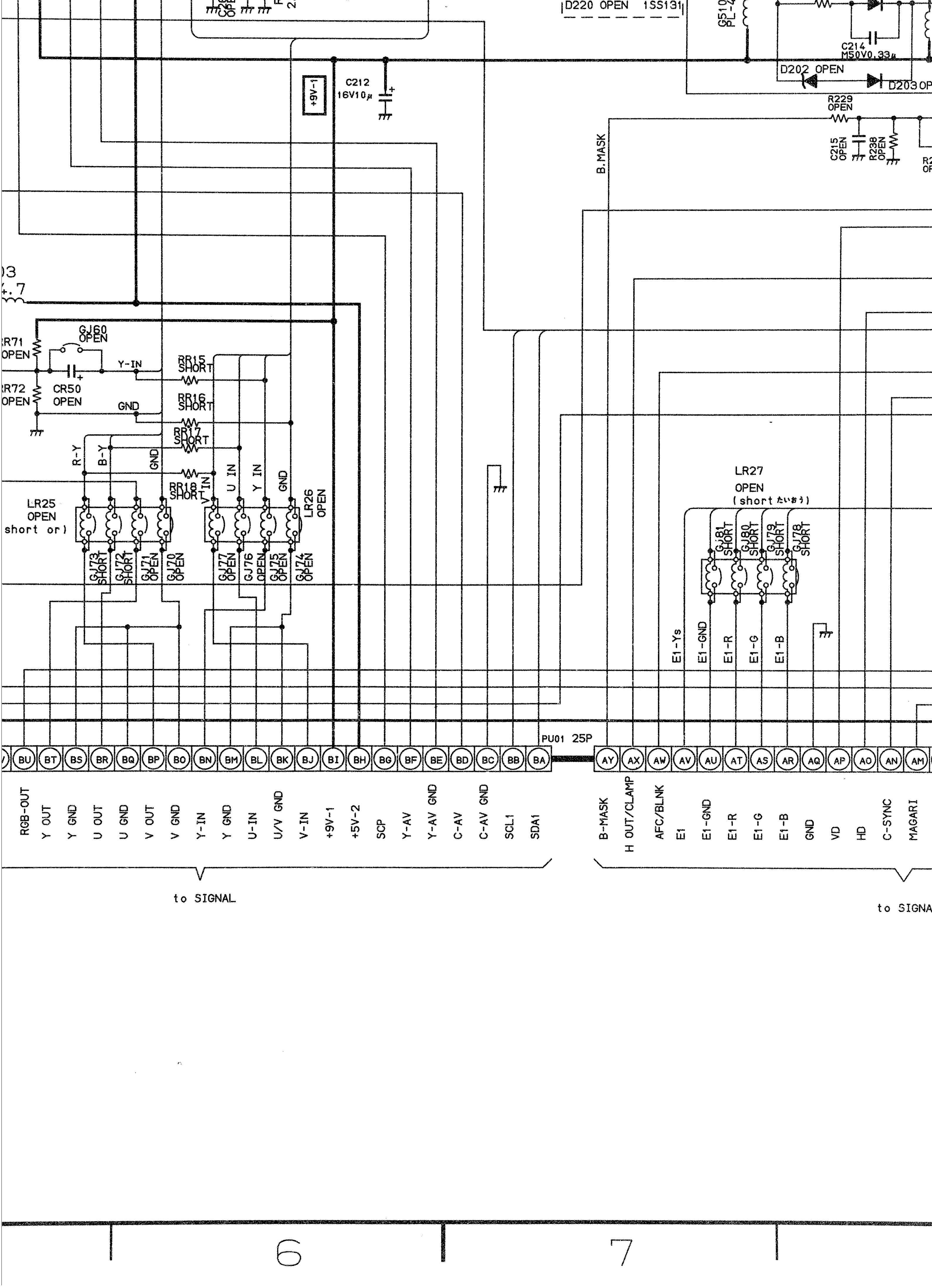
+5V-2
+9V-1
L200
TRF44R7AF
C230
16V220μ
R223
3.3K
Q205
2SC2712Y
R522
47K
R510
4.7K
L502
OPEN
GJ01
SHORT
GJ02
SHORT
R201
100
R202
OPEN
COLOR
9.0
Q503
2SA1162Y
2.2
1.6
L501
TRF4100AJ
R508
1K
C-AV
R509
1K
C524
1200
C525
CH180
L510
PL-4.7μ
CC42
GJ03
SHORT
L507
OPEN
R520
10K
Q504
2SC2712Y
R521
22K
GND
X503
4.43MHz
C507
CH12
C519
CH 1
#8
X501
3.58MHz
C505
CH12
C517
CH 1
#10
C501
100pF
C502
0.01
C503
16V220μ
C315
50V0.47μ
R315
XXX
GJ15
SHORT
L509
OPEN
GJ13 SHORT
L508
OPEN
GJ12
SHORT
R507
OPEN
C516
1000
C512
0.22μ
C504
M2200
R501
22K
C201
M0.1
1.4
1.0
4.0
2.0
2.5
2.5
0.1
4.0
4.0
4.0
2.25
5.0
2.5
0
2.5
6.4
2.9
9.0
CW
SCP
SECAM
Y1 OUT
Q/U OUT
I/V OUT
1H DL
XTAL-3
NC
XTAL-2
APC
5V
C IN
GND(C)
Y1 IN
V.SEP
HD OUT
(23906472)
Q501
TA1276AN
IK
R S/H
COL/LMT
Y2 IN
Q/U IN
I/V IN
BLACK DET
APL DET
VSM
Ym/Pow off
9V
ABL
GND(Y/C/RGB)
R OUT
G OUT
B OUT
9V
0.1
3.2
6.6
6.3
5.0
5.0
4.4
5.0
0.5
0
6.1
0
1.6
1.6
1.6
3.6
+9V-1
C556
1μ
L201
PL-10
C508 1μ
C203 M0.1
Y OUT
C554
0.01
C555
1μ
CC10
OPEN
GND
OSD Ym
C520
1000
C206
22μ
C521
1000
G529
M0.1
C261
100μ
C262
0.01
+9V
R516
100
U OUT
R517
100
V OUT
C514 M0.1
C515 M0.1
PCB
PCB
C204 1μ
C205 2.2μ
C513 0.01
C509 16V100μ
B
G
R
Q262
2SA1162Y
R260
15K
Q261
2SC2712Y
R266
2.2K
R268
100
R269
470
C264
OPEN
R261
6.8K
C263
OPEN
R267
2.2K
C260 16V47μNP
NP
R523
OPEN
R524
OPEN
PCB
D215 OPEN 1SS131
D216 OPEN 1SS131
D217 OPEN 1SS131
D218 OPEN 1SS131
D219 OPEN 1SS131
D220 OPEN 1SS131
R207
10K
R208
10K
R209
10K
G510
PL-4.7
R204
100K
D201
MA111
C214
M50V0.33μ
L5
PL

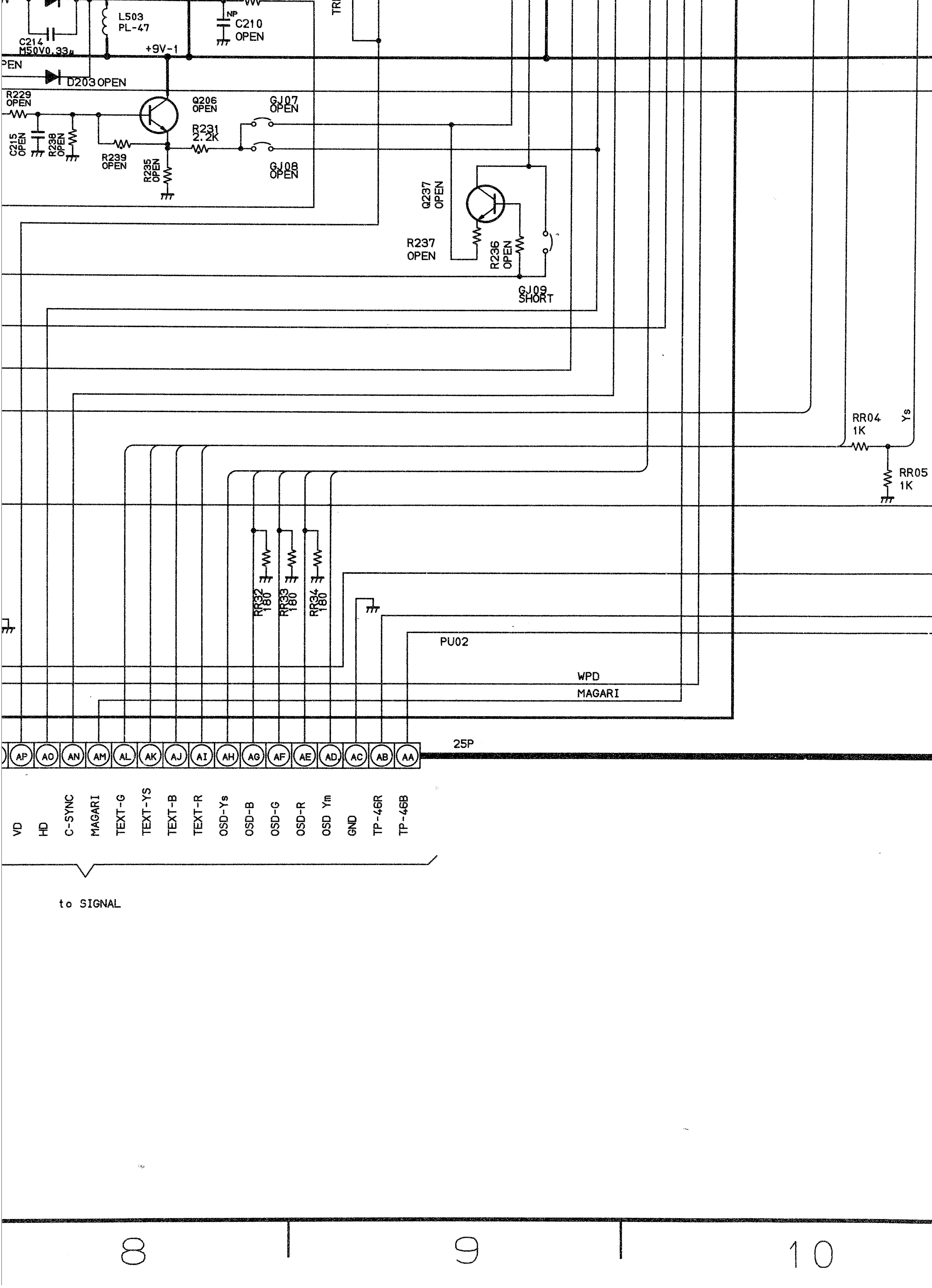

GJ11
OPEN
+9V-1
GJ10
OPEN
D431
HSM2836C
HVCC
Q430
2SD1944H
R432
1RF52
G432
SHORT
CC23
0.01
L400
TRF4101AF
D430
MA8051M
R425
15K
C432
OPEN
D432
MA8051M
L501
TRF4100AJ
B-Y
RR06
SHORT
R-Y
RR07
SHORT
C.Sync
C315
50V0.47μ
R315
XXXX
R407
10K
C404
2.2μ
C430
0.01
C431
16V1000μ
D421
MA111
R321
6.8K
R423 1.5K
R422
1.5K
BLK
V-STP
R421
220K
R415
OPEN
CC40
R403
3.9K
C403
0.01
X401
TCR1023
R401
390
GJ06
OPEN
RJ02 100
C415
3900
R402
10K
R222
33K
R502
100
R503
100
Y1 IN
V.SEP
HD OUT
SYNC OUT
GND(DEF)
AFC-1
32Hz H
9V(DEF)
SW/H OUT
CL/MASK /MAGARI
BLK
GND(digital)
SDA
SCL
D422
OPEN
G OUT
B OUT
9V
OSD R
OSD G
OSD B
OSD Ys
R IN
G IN
B IN
Ys
VD OUT
G S/H
B S/H
D230
OPEN
D229
OPEN
SDA1,SCL1
G529
M0.1
G528
M0.1
G527
M0.1
OSD Ys
CR12
0.1
CR13
0.1
CR14
0.1
C232
1μ
C229
1μ
C231
0.01
C228
0.01
D423 OPEN
RR03
OPEN
TEXT
ONLY
RR01
OPEN
RR02
OPEN
VD OUT
R426
OPEN
B OUT
G OUT
R OUT
C510
16V100μ
C511 0.01
R208
10K
R209
10K
D201
MA111
L503
PL-47
R216
10K
C210
OPEN
L333
TRF4101AJ
R217
OPEN
+9V-1
2.5 6.4 2.9 9.0 0 7.5 5.9 9 1.3 4.5 1.7 0 5.0 5.0
1.6 1.6 3.6 3.6 3.6 0.1 3.5 3.5 3.5 0.1 5.0 0.2 0

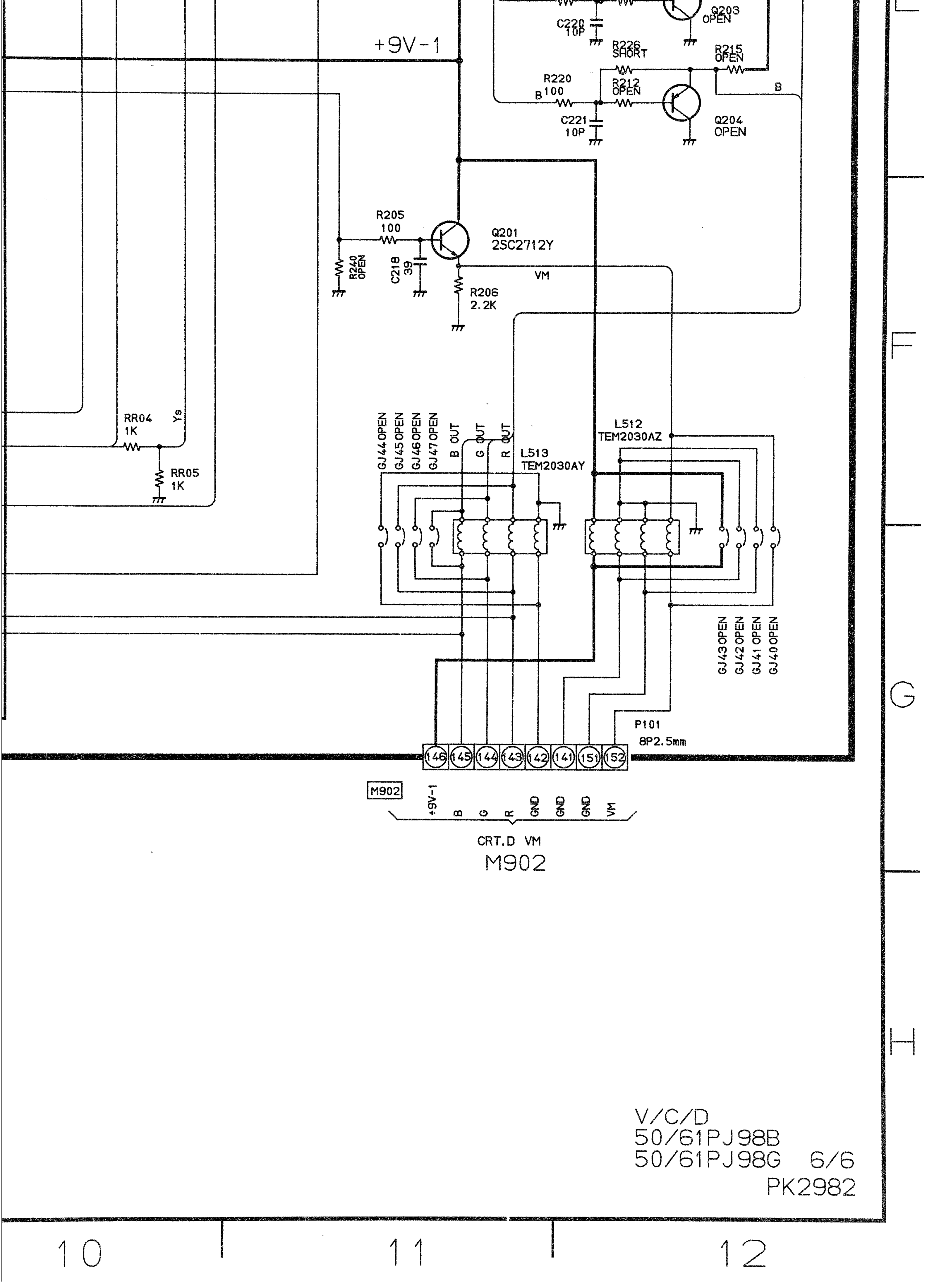

RR11
47K
RR10
10K
CR07
0.01
16
MATRIX
V-IN
1
CR02
15
U-OUT
Y-IN
2
M0.1
RR13
6.2K
DR12
OPEN
14
Y-OUT
U-IN
3
CR03
M0.1
13
V-OUT
CLP-IN
4
CR51
OPEN
RR12
1K
LR01
PL-10
12
VCC
GND
5
CR09
0.01
CR08
16V10μ
11
YS-3
R-IN
6
CR04
M0.1
B-Y
RR06
SHORT
U
10
YS-2
G-IN
7
CR05
M0.1
R-Y
RR07
SHORT
V
9
YS-1
B-IN
8
CR06
M0.1
CR10
OPEN
RR09
SHORT
RR08
OPEN
B
GR23
OPEN
+9V-1
C
CR21
OPEN
CR22
OPEN
RR20
OPEN
RR29
OPEN
RR23
OPEN
9.0
8
VDD
R-Y
3.3
1
RR27
OPEN
RR25
OPEN
3.3
7
B-Y
3.3
2
RR21
OPEN
3.3
6
3.3
3
RR31
OPEN
CR25
OPEN
3.3
5
VSS
0
4
RR22
OPEN
RR30
OPEN
QR21
OPEN
RR24
OPEN
CR23
OPEN
CR24
OPEN
D
Q202
OPEN
R360
OPEN
R364
OPEN
Q360
OPEN
R213
OPEN
C202
OPEN
R224
SHORT
R218
100
R210
OPEN
R
R365
OPEN
R366
OPEN
C219
10P
R
R225
SHORT
R214
OPEN
R219
100
R211
OPEN
G
G
Q203
OPEN
C220
10P
E


PL-4.7
+9V-1
CQ01
1000
LQ01
PL-27
CQ03
1000P
QQ01
TA1229N
RQ01
1K
CQ02 82P
CQ04 16V10μ
CQ05
M0.056
RQ02
OPEN
RQ20
56K
CQ09
2.2μ
CQ08
0.068
CQ07
M0.02
RQ03
1K
CQ10
M0.022
RQ04
510
CQ11
2.2μ
CQ43
9P
CQ12
82
GND
GJ54
OPEN
CQ13
50V1μ
SECAM IN
BELL
GND
B-Y IN
SCP
SDA
SCL
SW
VCC (9V)
GND
B-Y OUT
R-Y OUT
R-Y IN
RQ13
20K
RQ05
470
RQ06
470
CQ41
9P
CQ40
82
CQ46
1000
CQ42 9P
CQ18 82
RQ14
27K
CQ45
1000
XQ01
4.0MHz
CQ17
15P(CH
CQ16
0.01
CRYSTAL
CQ15
16V100μ
CQ14
50V1μ
3.5
1.9
4.5
8.2
8.2
6.9
6.9
0
3.7
0
4.5
0
8.9
8.9
0
4.4
4.4
4.5
PD50B
6P2.5mmL TYPE
57
58
GND
V
V
U
FROM DIG
F
G
H
1
2
3


R-Y IN
CQ33
M0.1
B-Y IN
CQ34
M0.1
LQ04
PL-4.7
CQ35
0.47μ
CQ36
0.47μ
1000
CQ61
CQ37
1μ
QQ03
2SC2712Y
QQ04
2SC2712Y
RQ11
560
CQ38
1μ
CQ39
1μ
RQ10
P1K
RQ12
P560
RQ09
P1K
GND(SECAM)
5.2
27
R-Y IN
5.2
26
B-Y IN
7.2
25
MODE SW-2
7.2
24
MODE SW-1
4.5
23
B-Y FROM CCD
4.5
22
R-Y FROM CCD
0
21
GND
10.7
20
Vgg
3.6
19
V OUT 1
1.5
18
Vod 1
1.5
17
Vod 2
3.6
16
V OUT 2
R-Y AGC
4.0
4
VCC
9.1
5
FILTER ADJ.
1.3
6
SCP
1.5
7
B-Y AGC
3.9
8
PLL
4.3
9
CLOCK OUT
2.3
10
CLOCK IN
2.4
11
VSS
0
12
Vin-1
2.6
13
Vdd 5V
5.1
14
Vin-2
2.6
15
CQ20
M0.1
CQ23
M0.1
RQ07
P10K
CQ24
M0.1
RQ08
P1K
CQ25
10μ
CQ26
M0.1
CQ27
M0.1
CQ28
0.47μ
CQ62
47
+5V-2
CQ31
0.47μ
CQ63
47
CQ29
16V100μ
+9V-2
CQ30
0.01
CQ21
16V47μ
CQ22
0.01
SCP
LQ03
PL-4.7
RR71
OPEN
GJ60
OPEN
RR72
OPEN
CR50
OPEN
Y-
GN
R-Y
B-Y
LR25
OPEN
(short or)
GJ73
SHORT
GJ72
SHORT
TYPE
57
58
59
60
61
62
V
V GND
U
U GND
Y
Y GND
FROM DIGITAL BOARD
PV03
10P
47
48
49
50
51
52
53
54
55
56
HVcc
NC
TOF
NC
YUV SW
NC
BLK
NC
V STP
NC
to SIGNAL
BY
BX
BW
BV
BU
BT
BS
BR
BQ
ABL
TPM-01
WPD
fsc
RGB-OUT
Y OUT
Y GND
U OUT
U GND
3
4
5


D220 OPEN 1SS131
G510
PL-4
C214
M50V0.33μ
D202 OPEN
D203 OP
R229
OPEN
C215
OPEN
R238
OPEN
C212
16V10μ
+9V-1
B.MASK
03
4.7
GJ60
OPEN
RR71
OPEN
RR72
OPEN
CR50
OPEN
Y-IN
GND
RR15
SHORT
RR16
SHORT
RR17
SHORT
RR18
SHORT
R-Y
B-Y
GND
V IN
U IN
Y IN
GND
LR25
OPEN
(short or)
LR26
OPEN
GJ73
SHORT
GJ72
SHORT
GJ71
OPEN
GJ70
OPEN
GJ77
OPEN
GJ76
OPEN
GJ75
OPEN
GJ74
OPEN
LR27
OPEN
(short たいまう)
GJ81
SHORT
GJ80
SHORT
GJ79
SHORT
GJ78
SHORT
E1-Ys
E1-GND
E1-R
E1-G
E1-B
PU01 25P
BU
BT
BS
BR
BQ
BP
BO
BN
BM
BL
BK
BJ
BI
BH
BG
BF
BE
BD
BC
BB
BA
AY
AX
AW
AV
AU
AT
AS
AR
AQ
AP
AO
AN
AM
RGB-OUT
Y OUT
Y GND
U OUT
U GND
V OUT
V GND
Y-IN
Y GND
U-IN
U/V GND
V-IN
+9V-1
+5V-2
SCP
Y-AV
Y-AV GND
C-AV
C-AV GND
SCL1
SDA1
B-MASK
H OUT/CLAMP
AFC/BLNK
E1
E1-GND
E1-R
E1-G
E1-B
GND
VD
HD
C-SYNC
MAGARI
to SIGNAL
to SIGNA
6
7


L503
PL-47
C214
M50V0.33μ
NP
C210
OPEN
+9V-1
OPEN
D203 OPEN
R229
OPEN
Q206
OPEN
GJ07
OPEN
R231
2.2K
C215
OPEN
R238
OPEN
R239
OPEN
R235
OPEN
GJ08
OPEN
Q237
OPEN
R237
OPEN
R236
OPEN
GJ09
SHORT
RR04
1K
Ys
RR05
1K
RR32
180
RR33
180
RR34
180
PU02
WPD
MAGARI
25P
AP
AO
AN
AM
AL
AK
AJ
AI
AH
AG
AF
AE
AD
AC
AB
AA
VD
HD
C-SYNC
MAGARI
TEXT-G
TEXT-YS
TEXT-B
TEXT-R
OSD-Ys
OSD-B
OSD-G
OSD-R
OSD Ym
GND
TP-46R
TP-46B
to SIGNAL
8
9
10


+9V-1
C220
10P
Q203
OPEN
R226
SHORT
R215
OPEN
R220
100
B
R212
OPEN
B
C221
10P
Q204
OPEN
R205
100
Q201
2SC2712Y
R240
OPEN
C218
39
VM
R206
2.2K
RR04
1K
Ys
RR05
1K
GJ44 OPEN
GJ45 OPEN
GJ46 OPEN
GJ47 OPEN
B OUT
G OUT
R OUT
L513
TEM2030AY
L512
TEM2030AZ
GJ43 OPEN
GJ42 OPEN
GJ41 OPEN
GJ40 OPEN
P101
8P2.5mm
146
145
144
143
142
141
151
152
M902
+9V-1
B
G
R
GND
GND
GND
VM
CRT.D VM
M902
F
G
H
10
11
12

V/C/D
50/61PJ98B
50/61PJ98G 6/6
PK2982

SCHEMATIC DIAGRAM

MODEL : 43PJ93B/G, 50PJ98B/G, 61PJ98B/G
40PW03B/G, 43PJ03B/G

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 3. Do not degrade the safety of the receiver through improper servicing.

33200013

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltages read with VTVM from point shown to chassis ground, line voltage 220 volts, colour bar signal. Voltages reading may vary ±20%.
2. All waveforms are taken using a wide band oscilloscope and a low capacity probe.
3. Waveforms are taken using a standard colour bar signal.
4. Make sure that CONTRAST and COLOUR controls are in mid position and BRIGHTNESS control is almost in maximum position. Set other controls for best picture.

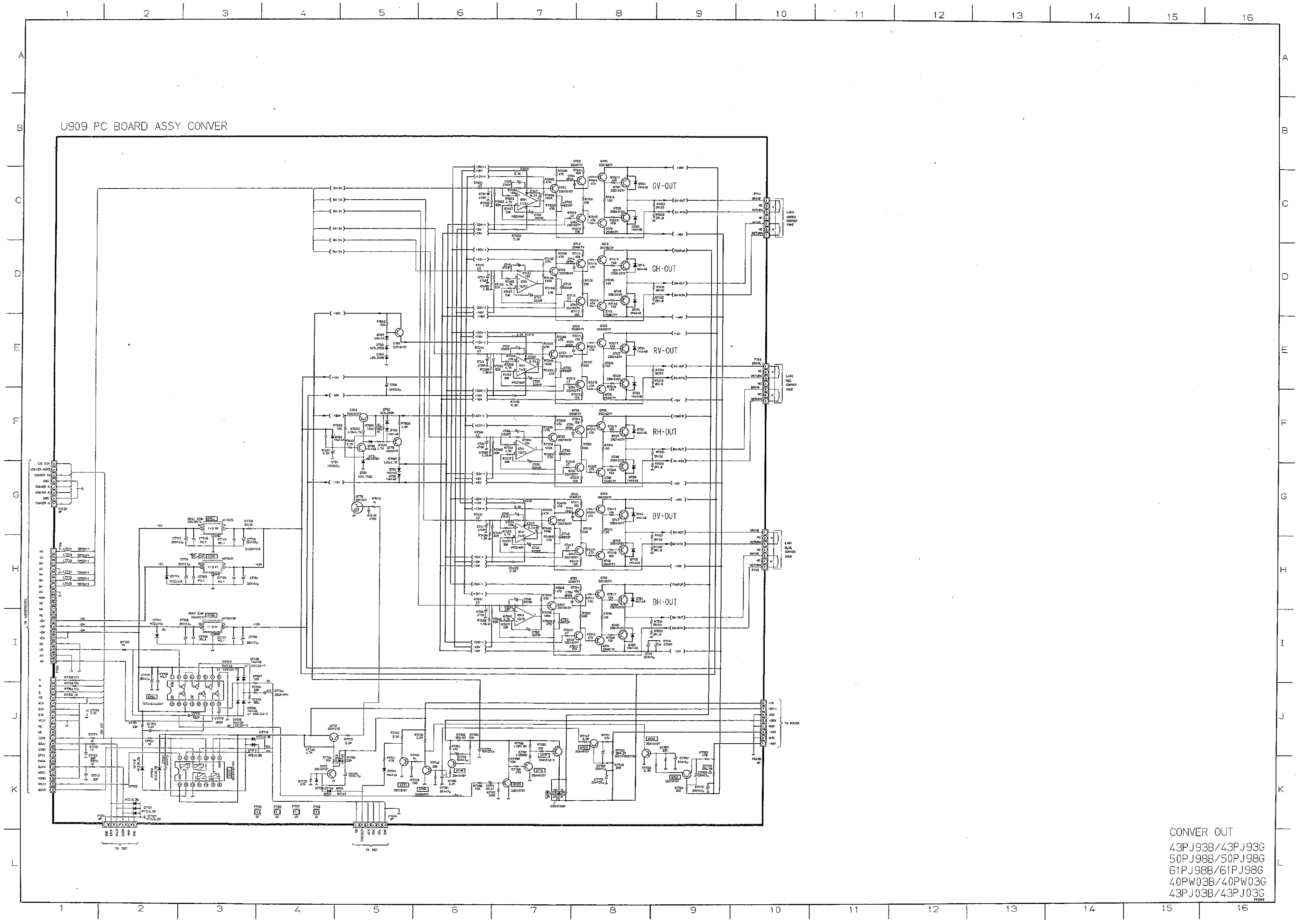
NOTES:

1. D.C. resistance value of a principal transformer is shown in this schematic diagram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.

EXPRESSION

VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less than 1 are expressed in µF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in µH, and the values less than 1 in H.



SCHEMATIC DIAGRAM

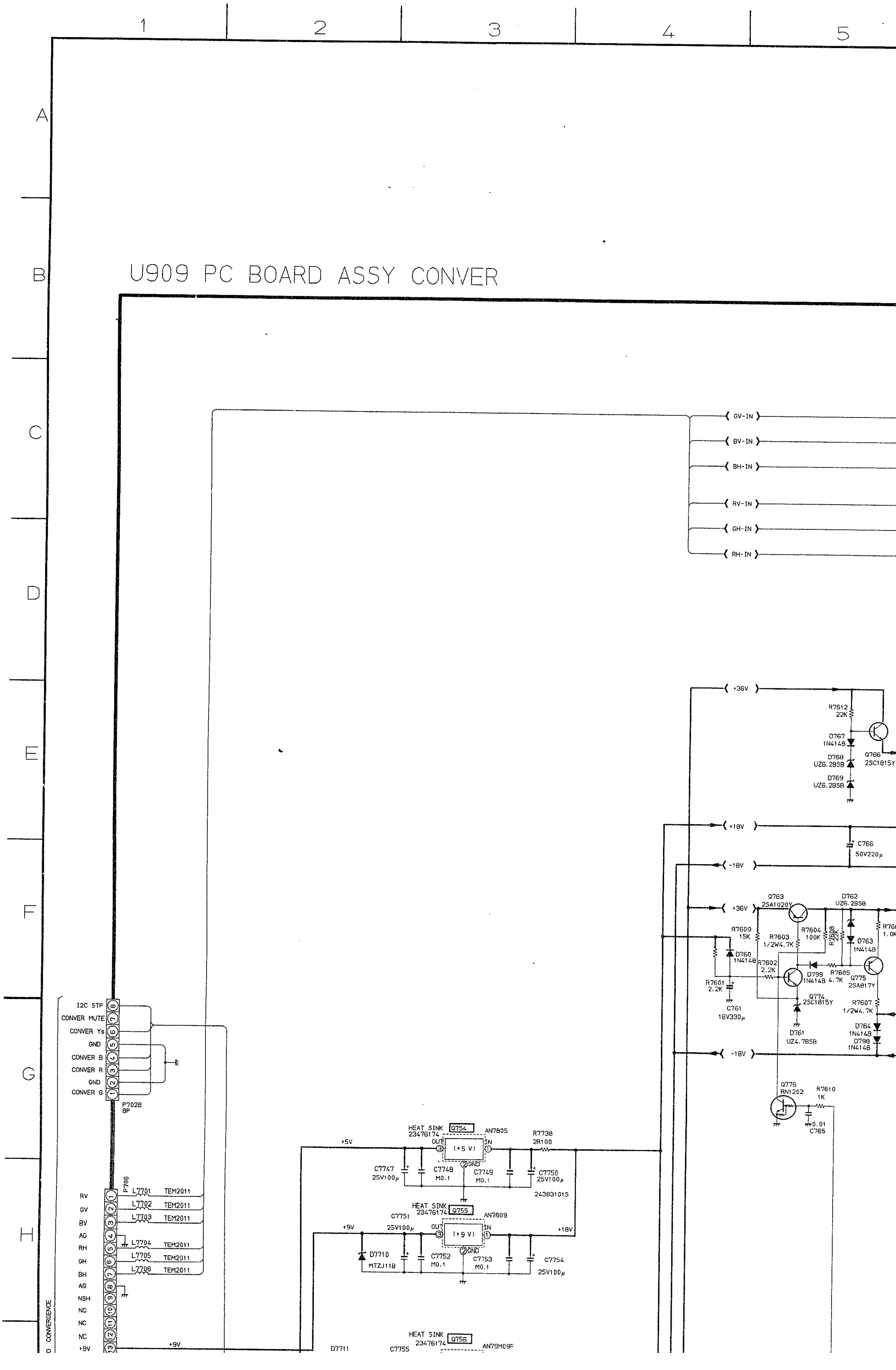
MODEL : 43PJ93B/G, 50PJ98B/G, 61PJ98B/G
40PW03B/G, 43PJ03B/G

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 3. Do not degrade the safety of the receiver through improper servicing.

OBSERVATION OF VOLTAGES AND WAV

1. Voltages read with VTVM from point sh
volts, colour bar signal. Voltages readir
2. All waveforms are taken using a wide bar
3. Waveforms are taken using a standard c
4. Make sure that CONTRAST and COLC
BRIGHTNESS control is almost in maxim
picture.

33200013



1
2
3
4
5
A
B
C
D
E
F
G
H
U909 PC BOARD ASSY CONVER
GV-IN
BV-IN
BH-IN
RV-IN
GH-IN
RH-IN
+36V
R7612
22K
D767
1N4148
D768
UZ6.2BSB
D769
UZ6.2BSB
Q766
2SC1815Y
+18V
C766
50V220μ
-18V
+36V
Q763
2SA1020Y
D762
UZ6.2BSB
R7609
15K
R7603
1/2W4.7K
R7604
100K
R7608
22K
D763
1N4148
R760
1.0K
D760
1N4148
R7602
2.2K
D799
1N4148
R7605
4.7K
Q775
2SA817Y
R7601
2.2K
C761
16V330μ
Q774
2SC1815Y
D761
UZ4.7BSB
R7607
1/2W4.7K
D764
1N4148
D798
1N4148
-18V
Q776
RN1202
R7610
1K
0.01
C765
I2C STP
CONVER MUTE
CONVER Ys
GND
CONVER B
CONVER R
GND
CONVER G
P702B
8P
P708
RV
GV
BV
AG
RH
GH
BH
AG
NSH
NC
NC
NC
+9V
CONVERGENCE
L7701 TEM2011
L7702 TEM2011
L7703 TEM2011
L7704 TEM2011
L7705 TEM2011
L7706 TEM2011
+9V
HEAT SINK
23476174
Q754
AN7805
+5V
OUT
IN
(+5 V)
GND
R7738
2R100
C7747
25V100μ
C7748
M0.1
C7749
M0.1
C7750
25V100μ
24383101S
HEAT SINK
23476174
Q755
AN7809
C7751
25V100μ
+9V
OUT
IN
(+9 V)
GND
+18V
D7710
MTZJ11B
C7752
M0.1
C7753
M0.1
C7754
25V100μ
HEAT SINK
23476174
Q756
AN79M09F
D7711
C7755

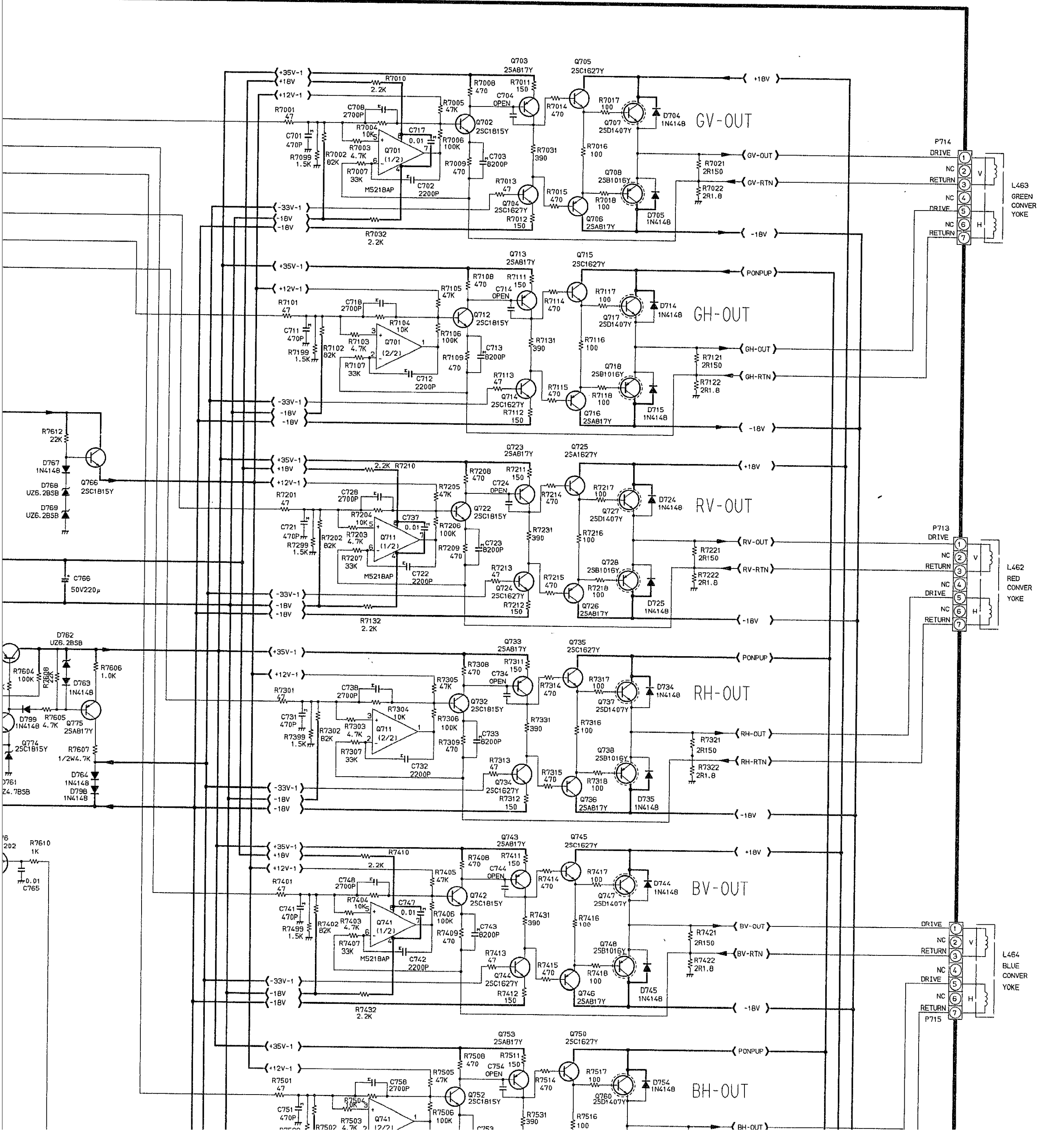
GES AND WAVEFORMS

M from point shown to chassis ground, line voltage 220
Voltages reading may vary ±20%.
using a wide band oscilloscope and a low capacity probe.
sing a standard colour bar signal.
RAST and COLOUR controls are in mid position and
almost in maximum position. Set other controls for best

NOTES:

1. D.C. resistance value of a principal transformer is shown in this schematic diagram. These are measured for separated from the circuit.
2. The circuits are subject to change without notice.
3. ⊖ : Solder links.

5 | 6 | 7 | 8 | 9 | 10 | 11


GV-OUT
GH-OUT
RV-OUT
RH-OUT
BV-OUT
BH-OUT
+35V-1
+18V
+12V-1
-33V-1
-18V
PONPUP
GV-RTN
GH-RTN
RV-RTN
RH-RTN
BV-RTN
P714
P713
P715
DRIVE
NC
RETURN
V
H
L463 GREEN CONVER YOKE
L462 RED CONVER YOKE
L464 BLUE CONVER YOKE
Q701 (1/2)
Q701 (2/2)
Q711 (1/2)
Q711 (2/2)
Q741 (1/2)
M5218AP
Q703 2SA817Y
Q705 2SC1627Y
Q702 2SC1815Y
Q704 2SC1627Y
Q706 2SA817Y
Q707 2SD1407Y
Q708 2SB1016Y
D704 1N4148
D705 1N4148
R7021 2R150
R7022 2R1.8
R7032 2.2K
R7010 2.2K
Q766 2SC1815Y
Q775 2SA817Y
Q774 2SC1815Y
D767 1N4148
D768 UZ6.2BSB
D769 UZ6.2BSB
C766 50V220μ
D762 UZ6.2BSB
D763 1N4148
D764 1N4148
D798 1N4148
D799 1N4148
R7612 22K
R7604 100K
R7606 1.0K
R7605 4.7K
R7607 1/2W4.7K
R7610 1K
C765 0.01

s schematic dia-

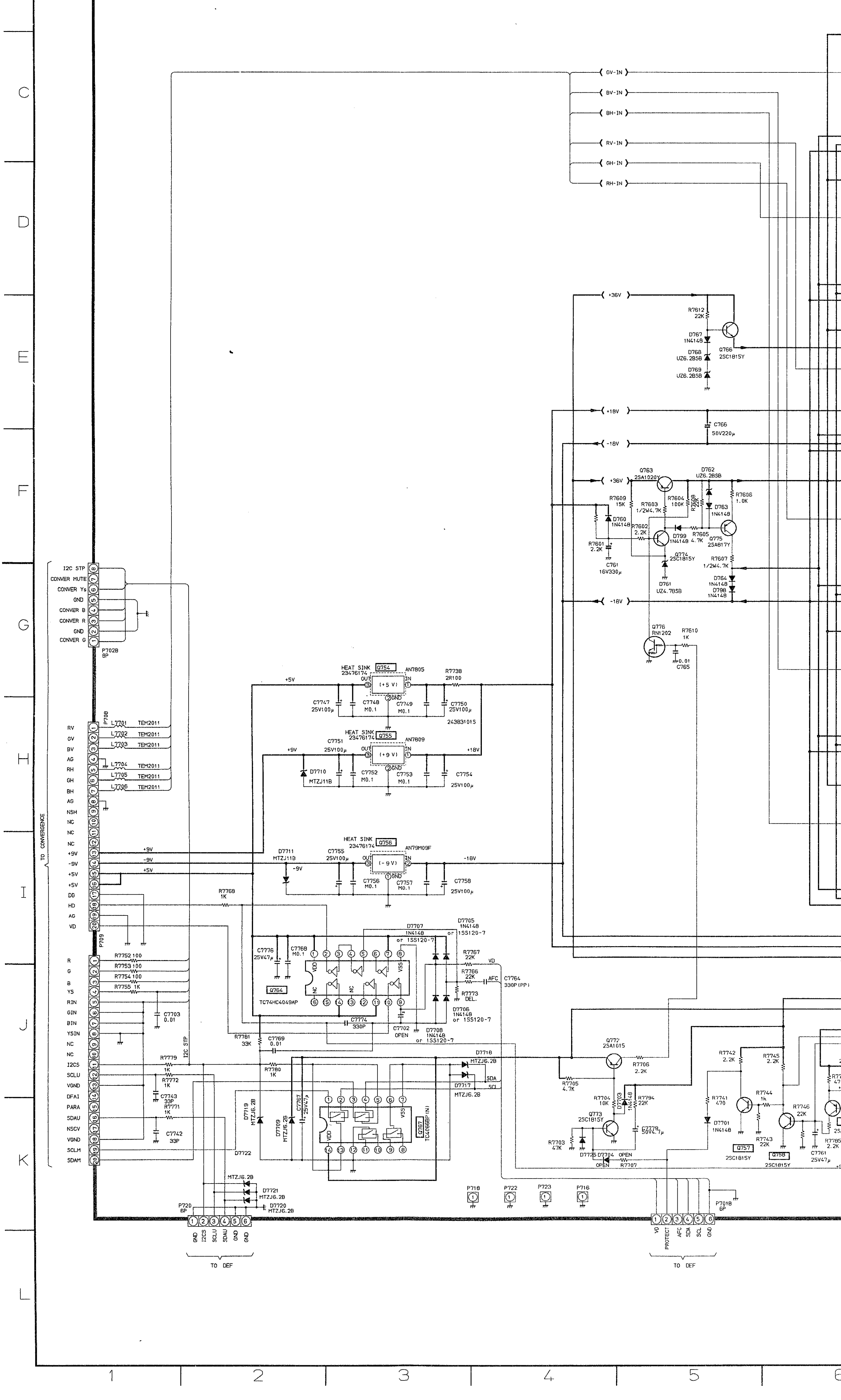
EXPRESSION

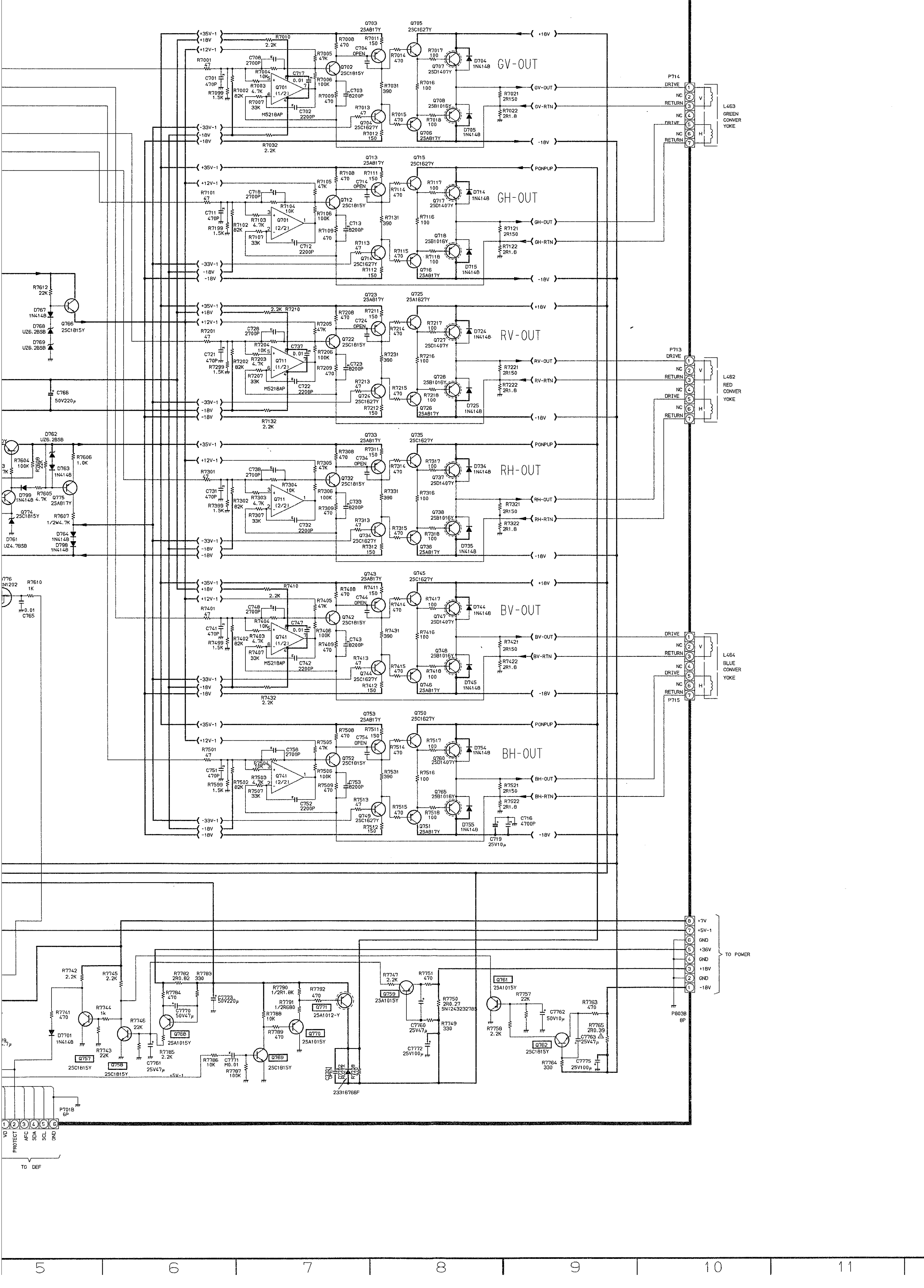
VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000
2. Unless other wise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH, and the values less than 1 in H.

11 12 13 14 15 16

A
B
C
D
E
F
G
H


C
D
E
F
G
H
I
J
K
L
1
2
3
4
5
6
GV-IN
BV-IN
BH-IN
RV-IN
GH-IN
RH-IN
+36V
R7612 22K
D767 1N4148
D768 UZ6.2BSB
D769 UZ6.2BSB
Q766 2SC1815Y
+18V
C766 50V220μ
-18V
Q763 2SA1020Y
D762 UZ6.2BSB
R7609 15K
R7603 1/2W4.7K
R7604 100K
R7608 22K
R7606 1.0K
D763 1N4148
D760 1N4148
R7602 2.2K
D799 1N4148
R7605 4.7K
Q775 2SA817Y
R7601 2.2K
Q774 2SC1815Y
R7607 1/2W4.7K
C761 16V330μ
D761 UZ4.7BSB
D764 1N4148
D798 1N4148
Q776 RN1202
R7610 1K
0.01 C765
I2C STP
CONVER MUTE
CONVER Ys
GND
CONVER B
CONVER R
GND
CONVER G
P702B 8P
HEAT SINK 23476174
Q754
AN7805
(+5V)
OUT IN GND
R7738 2R100
+5V
C7747 25V100μ
C7748 M0.1
C7749 M0.1
C7750 25V100μ
24383101S
HEAT SINK 23476174
Q755
AN7809
(+9V)
C7751 25V100μ
+9V
+18V
D7710 MTZJ11B
C7752 M0.1
C7753 M0.1
C7754 25V100μ
P708
RV GV BV AG RH GH BH AG NSH NC NC NC +9V -9V +5V +5V DG HD AG VD
L7701 TEM2011
L7702 TEM2011
L7703 TEM2011
L7704 TEM2011
L7705 TEM2011
L7706 TEM2011
TO CONVERGENCE
HEAT SINK 23476174
Q756
AN79M09F
(-9V)
D7711 MTZJ11B
C7755 25V100μ
-9V
-18V
C7756 M0.1
C7757 M0.1
C7758 25V100μ
R7768 1K
P709
R G B YS RIN GIN BIN YSIN NC NC I2CS SCLU VGND DFAI PARA SDAU NSCV VGND SCLM SDAM
R7752 100
R7753 100
R7754 100
R7755 1K
C7703 0.01
I2C STP
R7779 1K
R7772 1K
C7743 33P
R7771 1K
C7742 33P
C7776 25V47μ
C7768 M0.1
Q764
TC74HC4049AP
VDD NC VSS
D7707 1N4148 or 1SS120-7
D7705 1N4148 or 1SS120-7
R7767 22K
VD
R7766 22K
AFC
C7764 330P(PP)
R7773 DEL.
D7706 1N4148 or 1SS120-7
C7774 330P
C7702 OPEN
D7708 1N4148 or 1SS120-7
R7781 33K
C7769 0.01
R7780 1K
D7718 MTZJ6.2B
SDA
SCL
D7717 MTZJ6.2B
D7719 MTZJ6.2B
D7709 MTZJ6.2B
C7767 25V47μ
Q767 TC4066BP(N)
D7722
MTZJ6.2B
D7721 MTZJ6.2B
D7720 MTZJ6.2B
P720 6P
GND I2CS SCLU SDAU GND GND
TO DEF
P718
P722
P723
P716
Q772 2SA1015
R7706 2.2K
R7705 4.7K
R7704 10K
D7703 1N4148
R7794 22K
Q773 2SC1815Y
C7779 50V4.7μ
R7703 47K
D7725
D7704 OPEN
OPEN
R7707
P701B 6P
VD PROTECT AFC SDA SCL GND
TO DEF
R7742 2.2K
R7745 2.2K
R7741 470
R7744 1k
R7746 22K
D7701 1N4148
R7743 22K
Q757 2SC1815Y
Q758 2SC1815Y
C7761 25V47μ
R7785 2.2K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GH-OUT
RV-OUT
RH-OUT
BV-OUT
BH-OUT
+35V-1
+18V
+12V-1
-33V-1
-18V
+18V
-18V
PONPUP
GV-OUT
GV-RTN
GH-OUT
GH-RTN
RV-OUT
RV-RTN
RH-OUT
RH-RTN
BV-OUT
BV-RTN
BH-OUT
BH-RTN
P714
P713
P715
DRIVE
NC
RETURN
V
H
L463
GREEN
CONVER
YOKE
L462
RED
CONVER
YOKE
L464
BLUE
CONVER
YOKE
Q701 M5218AP
Q711 M5218AP
Q741 M5218AP
Q703 2SA817Y
Q705 2SC1627Y
Q707 2SD1407Y
Q708 2SB1016Y
Q702 2SC1815Y
Q704 2SC1627Y
Q706 2SA817Y
D704 1N4148
D705 1N4148
Q766 2SC1815Y
Q775 2SA817Y
Q774 2SC1815Y
D767 1N4148
D768 UZ6.2BSB
D769 UZ6.2BSB
D762 UZ6.2BSB
D761 UZ4.7BSB
C766 50V220μ
C716 4700P
C719 25V10μ
+7V
+5V-1
GND
+36V
+18V
-18V
TO POWER
P803B 8P
Q757 2SC1815Y
Q758 2SC1815Y
Q768 2SA1015Y
Q769 2SC1815Y
Q770 2SA1015Y
Q771 2SA1012-Y
Q759 2SA1015Y
Q761 2SA1015Y
Q762 2SC1815Y
D7701 1N4148
R7750 2R0.27 SN:243232785
R7765 2R0.39
C7763 25V47μ
23316766F
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VD
PROTECT
AFC
SDA
SCL
GND
TO DEF
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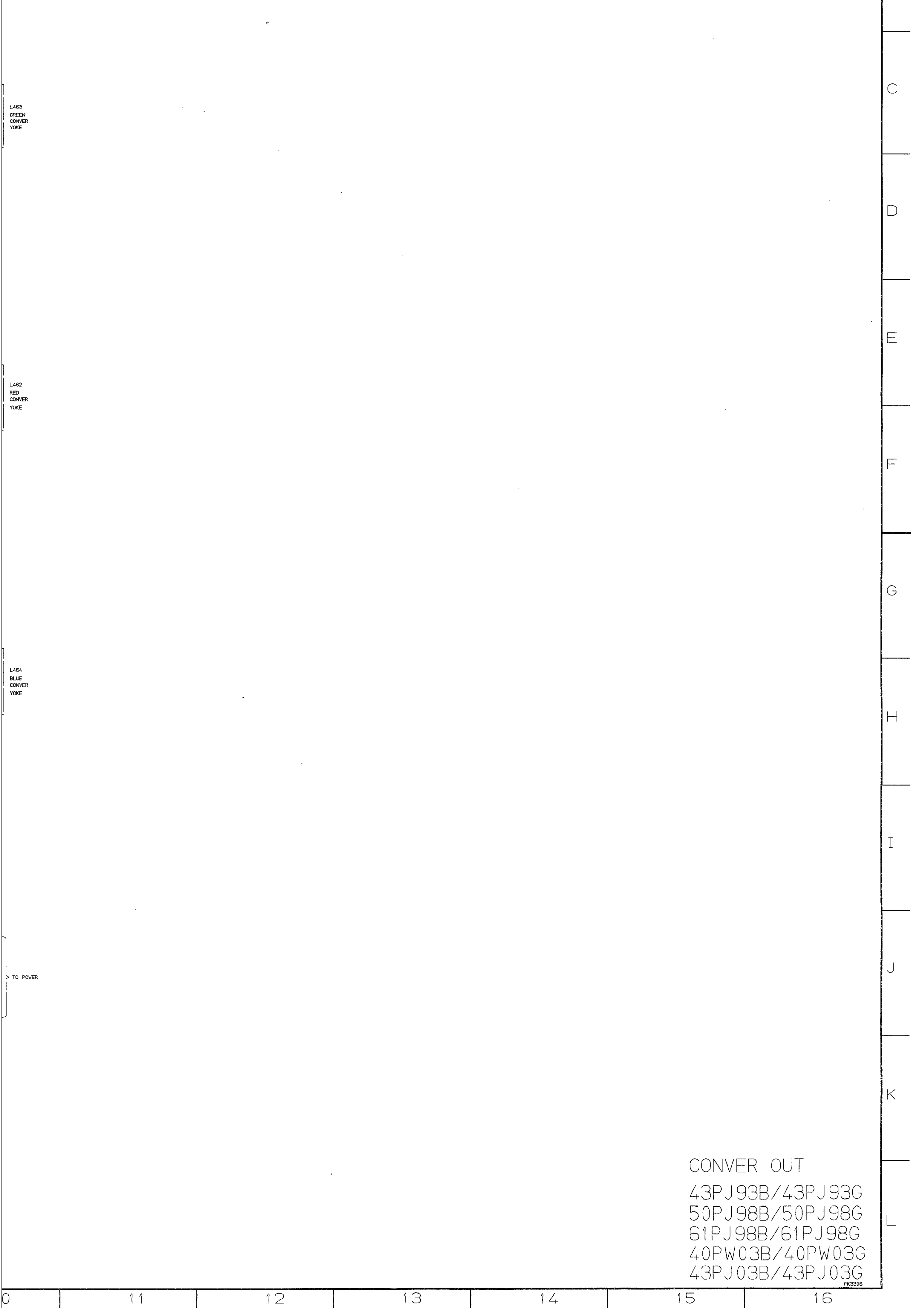
L463
GREEN
CONVER
YOKE
L462
RED
CONVER
YOKE
L464
BLUE
CONVER
YOKE
TO POWER
C
D
E
F
G
H
I
J
K
L
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11
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13
14
15
16

CONVER OUT

43PJ93B/43PJ93G
50PJ98B/50PJ98G
61PJ98B/61PJ98G
40PW03B/40PW03G
43PJ03B/43PJ03G

PK3308

TOSHIBA

FILE NO. 033-200013
SUPPLEMENT

SERVICE MANUAL

COLOUR TELEVISION

C8SS, C9SS, C9PJ Chassis

43PJ93B, 43PJ93G, 50PJ98B, 50PJ98G, 61PJ98B, 61PJ98G, 40PW03B, 40PW03G, 43PJ03B, 43PJ03G

– SUMMARY –

This supplement covers revised version of replacement parts list and PC Board Bottom view and Circuit Diagram for above model.
Use this service manual together with the service manual as follows.

43PJ93B, 43PJ93G	(File No. 030-9904)
50PJ98B, 50PJ98G	(File No. 030-9915)
61PJ98B, 61PJ98G	(File No. 030-9924)
40PW03B, 40PW03G	(File No. 030-200001)
43PJ03B, 43PJ03G	(File No. 033-200006)

PRINTED IN JAPAN, Dec., 2000 Ⓣ

CHASSIS REPLACEMENT PARTS LIST

[CONVER OUT UNIT]

Location No.	Part No.	Description
CAPACITORS		
C701	24591471	PF, 470pF
C702	24591222	PF, 2200pF
C703	24591822	PF, 8200pF
C708	24591272	PF, 2700pF
C711	24591471	PF, 470pF
C712	24591222	PF, 2200pF
C713	24591822	PF, 8200pF
C716	24591472	PF, 4700pF
C717	24591103	PF, 0.01μF
C718	24591272	PF, 2700pF
C719	24667100	EL, 10μF, ±20%, 25V
C721	24591471	PF, 470pF
C722	24591222	PF, 2200pF
C723	24591822	PF, 8200pF
C728	24591272	PF, 2700pF
C731	24591471	PF, 470pF
C732	24591222	PF, 2200pF
C733	24591822	PF, 8200pF
C737	24591103	PF, 0.01μF
C738	24591272	PF, 2700pF
C741	24591471	PF, 470pF
C742	24591222	PF, 2200pF
C743	24591822	PF, 8200pF
C747	24591103	PF, 0.01μF
C748	24591272	PF, 2700pF
C751	24591471	PF, 470pF
C752	24591222	PF, 2200pF
C753	24591822	PF, 8200pF
C758	24591272	PF, 2700pF
C761	24666331	EL, 330μF, ±20%, 16V
C765	24232103	CD, 0.01μF, +80%, -20%
C766	24669221	EL, 220μF, ±20%, 50V
C7703	24232103	CD, 0.01μF, +80%, -20%
C7742	24436330	CD, 33pF
C7743	24436330	CD, 33pF
C7747	24667101	EL, 100μF, ±20%, 25V
C7748	24567104	PF, 0.1μF
C7749	24567104	PF, 0.1μF
C7750	24667101	EL, 100μF, ±20%, 25V
C7751	24667101	EL, 100μF, ±20%, 25V
C7752	24567104	PF, 0.1μF
C7753	24567104	PF, 0.1μF
C7754	24667101	EL, 100μF, ±20%, 25V
C7755	24667101	EL, 100μF, ±20%, 25V
C7756	24567104	PF, 0.1μF
C7757	24567104	PF, 0.1μF
C7758	24667101	EL, 100μF, ±20%, 25V
C7760	24667470	EL, 47μF, ±20%, 25V
C7761	24667470	EL, 47μF, ±20%, 25V
C7762	24669100	EL, 10μF, ±20%, 50V
C7763	24667470	EL, 47μF, ±20%, 25V
C7764	24598331	PF, 330pF
C7767	24667470	EL, 47μF, ±20%, 25V
C7768	24567104	PF, 0.1μF
C7769	24232103	CD, 0.01μF, +80%, -20%
C7770	24669470	EL, 47μF, ±20%, 50V
C7771	24567103	PF, 0.01μF
C7772	24667101	EL, 100μF, ±20%, 25V
C7773	24669221	EL, 220μF, ±20%, 50V
C7774	24436331	CD, 330pF
C7775	24667101	EL, 100μF, ±20%, 25V
C7776	24667470	EL, 47μF, ±20%, 25V
C7779	24669479	EL, 4.7μF, ±20%, 50V
RESISTORS		
R7001	24366470	CF, 47 ohm
R7002	24366823	CF, 82k ohm
R7003	24366472	CF, 4700 ohm
R7004	24366103	CF, 10k ohm
R7005	24366473	CF, 47k ohm
R7006	24366104	CF, 100k ohm
R7007	24366333	CF, 33k ohm
R7008	24366471	CF, 470 ohm
R7009	24366471	CF, 470 ohm
R7010	24366222	CF, 2200 ohm
R7011	24366151	CF, 150 ohm
R7012	24366151	CF, 150 ohm
R7013	24366470	CF, 47 ohm
R7014	24366471	CF, 470 ohm
R7015	24366471	CF, 470 ohm
R7016	24366101	CF, 100 ohm
R7017	24366101	CF, 100 ohm
R7018	24366101	CF, 100 ohm
R7021	24554151	OMF, 150 ohm, 2W
R7022	24323189	MF, 1.8 ohm, 2W
R7031	24366391	CF, 390 ohm
R7032	24366222	CF, 2200 ohm
R7099	24366152	CF, 1500 ohm
R7101	24366470	CF, 47 ohm
R7102	24366823	CF, 82k ohm
R7103	24366472	CF, 4700 ohm
R7104	24366103	CF, 10k ohm
R7105	24366473	CF, 47k ohm
R7106	24366104	CF, 100k ohm
R7107	24366333	CF, 33k ohm
R7108	24366471	CF, 470 ohm
R7109	24366471	CF, 470 ohm
R7111	24366151	CF, 150 ohm
R7112	24000151	MF, 750 ohm, 1/4W
R7113	24366470	CF, 47 ohm
R7114	24366471	CF, 470 ohm
R7115	24366471	CF, 470 ohm
R7116	24366101	CF, 100 ohm
R7117	24366101	CF, 100 ohm
R7118	24366101	CF, 100 ohm
R7121	24554151	OMF, 150 ohm, 2W
R7122	24323189	MF, 1.8 ohm, 2W
R7131	24366391	CF, 390 ohm
R7132	24366222	CF, 2200 ohm
R7199	24366152	CF, 1500 ohm
R7201	24366470	CF, 47 ohm
R7202	24366823	CF, 82k ohm
R7203	24366472	CF, 4700 ohm
R7204	24366103	CF, 10k ohm
R7205	24366473	CF, 47k ohm
R7206	24366104	CF, 100k ohm
R7207	24366333	CF, 33k ohm
R7208	24366471	CF, 470 ohm
R7209	24366471	CF, 470 ohm

Location No.	Part No.	Description
R7210	24366222	CF, 2200 ohm
R7211	24366151	CF, 150 ohm
R7212	24366151	CF, 150 ohm
R7213	24366470	CF, 47 ohm
R7214	24366471	CF, 470 ohm
R7215	24366471	CF, 470 ohm
R7216	24366101	CF, 100 ohm
R7217	24366101	CF, 100 ohm
R7218	24366101	CF, 100 ohm
R7221	24554151	OMF, 150 ohm, 2W
R7222	24323189	MF, 1.8 ohm, 2W
R7231	24366391	CF, 390 ohm
R7299	24366152	CF, 1500 ohm
R7301	24366470	CF, 47 ohm
R7302	24366823	CF, 82k ohm
R7303	24366472	CF, 4700 ohm
R7304	24366103	CF, 10k ohm
R7305	24366473	CF, 47k ohm
R7306	24366104	CF, 100k ohm
R7307	24366333	CF, 33k ohm
R7308	24366471	CF, 470 ohm
R7309	24366471	CF, 470 ohm
R7311	24366151	CF, 150 ohm
R7312	24366151	CF, 150 ohm
R7313	24366470	CF, 47 ohm
R7314	24366471	CF, 470 ohm
R7315	24366471	CF, 470 ohm
R7316	24366101	CF, 100 ohm
R7317	24366101	CF, 100 ohm
R7318	24366101	CF, 100 ohm
R7321	24554151	OMF, 150 ohm, 2W
R7322	24323189	MF, 1.8 ohm, 2W
R7331	24366391	CF, 390 ohm
R7399	24366152	CF, 1500 ohm
R7401	24366470	CF, 47 ohm
R7402	24366823	CF, 82k ohm
R7403	24366472	CF, 4700 ohm
R7404	24366103	CF, 10k ohm
R7405	24366473	CF, 47k ohm
R7406	24366104	CF, 100k ohm
R7407	24366333	CF, 33k ohm
R7408	24366471	CF, 470 ohm
R7409	24366471	CF, 470 ohm
R7410	24366222	CF, 2200 ohm
R7411	24366151	CF, 150 ohm
R7412	24366151	CF, 150 ohm
R7413	24366470	CF, 47 ohm
R7414	24366471	CF, 470 ohm
R7415	24366471	CF, 470 ohm
R7416	24366101	CF, 100 ohm
R7417	24366101	CF, 100 ohm
R7418	24366101	CF, 100 ohm
R7421	24554151	OMF, 150 ohm, 2W
R7422	24323189	MF, 1.8 ohm, 2W
R7431	24366391	CF, 390 ohm
R7432	24366222	CF, 2200 ohm
R7499	24366152	CF, 1500 ohm
R7501	24366470	CF, 47 ohm
R7502	24366823	CF, 82k ohm
R7503	24366472	CF, 4700 ohm
R7504	24366103	CF, 10k ohm
R7505	24366473	CF, 47k ohm
R7506	24366104	CF, 100k ohm
R7507	24366333	CF, 33k ohm

Location No.	Part No.	Description
R7508	24366471	CF, 470 ohm
R7509	24366471	CF, 470 ohm
R7511	24366151	CF, 150 ohm
R7512	24366151	CF, 150 ohm
R7513	24366470	CF, 47 ohm
R7514	24366471	CF, 470 ohm
R7515	24366471	CF, 470 ohm
R7516	24366101	CF, 100 ohm
R7517	24366101	CF, 100 ohm
R7518	24366101	CF, 100 ohm
R7521	24554151	OMF, 150 ohm, 2W
R7522	24323189	MF, 1.8 ohm, 2W
R7531	24366391	CF, 390 ohm
R7599	24366152	CF, 1500 ohm
R7601	24366222	CF, 2200 ohm
R7602	24366222	CF, 2200 ohm
R7603	24381472	OMF, 4700 ohm, 1/2W
R7604	24366104	CF, 100k ohm
R7605	24366472	CF, 4700 ohm
R7606	24366102	CF, 1k ohm
R7607	24381472	OMF, 4700 ohm, 1/2W
R7608	24366223	CF, 22k ohm
R7609	24366153	CF, 15k ohm
R7612	24366223	CF, 22k ohm
R7703	24366473	CF, 47k ohm
R7704	24366103	CF, 10k ohm
R7705	24366472	CF, 4700 ohm
R7706	24366222	CF, 2200 ohm
R7708	24366471	CF, 470 ohm
R7738	24554101	OMF, 100 ohm, 2W
R7741	24366471	CF, 470 ohm
R7742	24366222	CF, 2200 ohm
R7743	24366223	CF, 22k ohm
R7744	24366102	CF, 1k ohm
R7745	24366222	CF, 2200 ohm
R7746	24366223	CF, 22k ohm
R7747	24366222	CF, 2200 ohm
R7749	24366331	CF, 330 ohm
R7750	24323278	MF, 0.27 ohm, 2W
R7751	24366471	CF, 470 ohm
R7752	24366101	CF, 100 ohm
R7753	24366101	CF, 100 ohm
R7754	24366101	CF, 100 ohm
R7755	24366102	CF, 1k ohm
R7757	24366223	CF, 22k ohm
R7758	24366222	CF, 2200 ohm
R7763	24366471	CF, 470 ohm
R7764	24366331	CF, 330 ohm
R7765	24339398	MF, 0.39 ohm, 2W
R7766	24366223	CF, 22k ohm
R7767	24366223	CF, 22k ohm
R7768	24366102	CF, 1k ohm
R7771	24366102	CF, 1k ohm
R7772	24366102	CF, 1k ohm
R7779	24366102	CF, 1k ohm
R7780	24366102	CF, 1k ohm
R7781	24366333	CF, 33k ohm
R7782	24339828	MF, 0.82 ohm, 2W
R7783	24366331	CF, 330 ohm
R7784	24366471	CF, 470 ohm
R7785	24366222	CF, 2200 ohm
R7786	24366103	CF, 10k ohm
R7787	24366104	CF, 100k ohm
R7788	24366103	CF, 10k ohm

Location No.	Part No.	Description
R7789	24366471	CF, 470 ohm
R7790	24552182	OMF, 1800 ohm, 1/2W
R7791	24552681	OMF, 680 ohm, 1/2W
R7792	24366471	CF, 470 ohm
R7794	24366223	CF, 22k ohm

COILS & TRANSFORMERS

Location No.	Part No.	Description
L7701	23103859	Coil (Ferrite Bead), TEM2011
L7702	23103859	Coil (Ferrite Bead), TEM2011
L7703	23103859	Coil (Ferrite Bead), TEM2011
L7704	23103859	Coil (Ferrite Bead), TEM2011
L7705	23103859	Coil (Ferrite Bead), TEM2011
L7706	23103859	Coil (Ferrite Bead), TEM2011

SEMICONDUCTORS

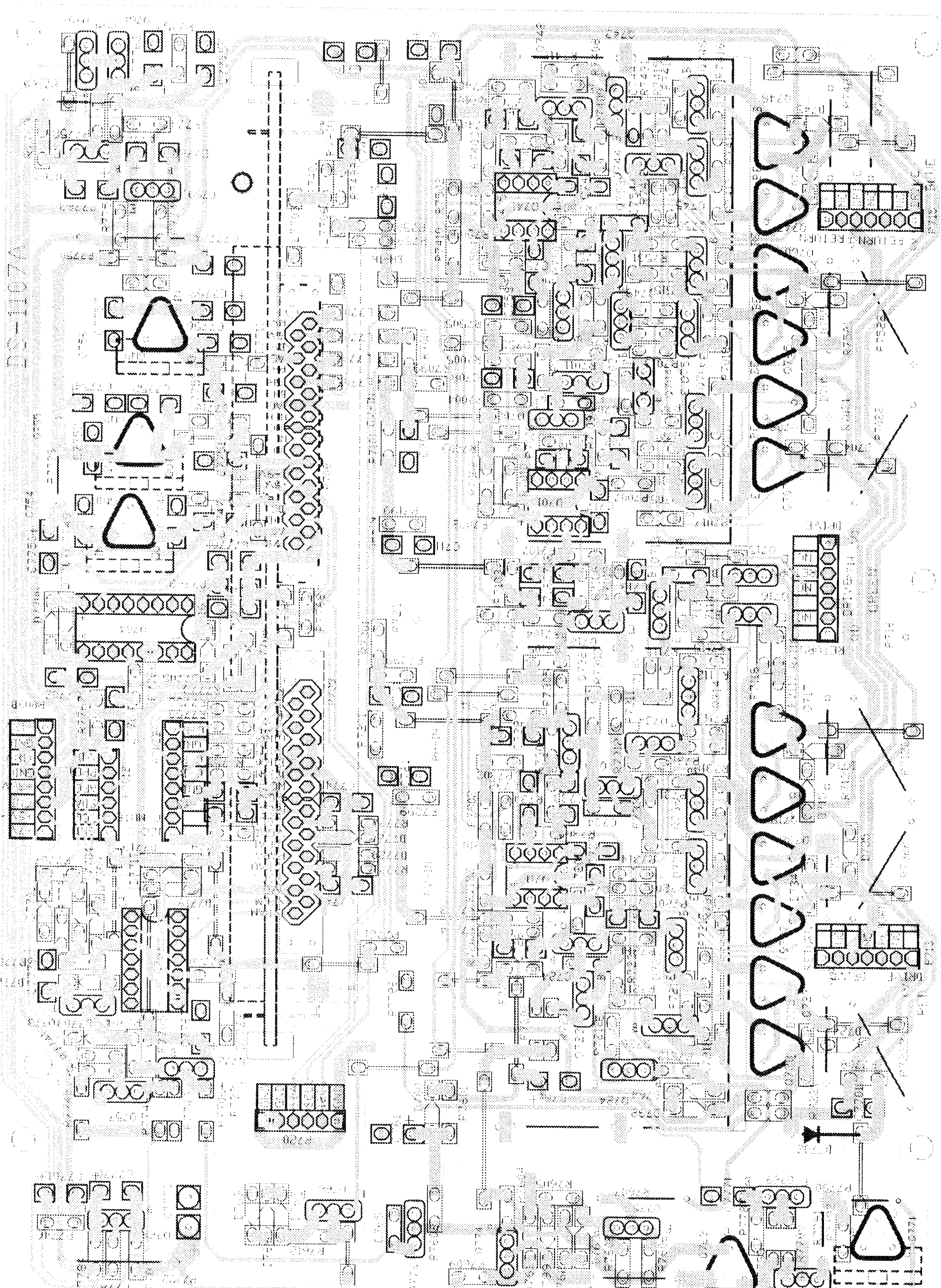
Location No.	Part No.	Description
Q701	23319808	IC, M5218AP
Q702	A6317440	Transistor, 2SC1815-Y
Q703	A6531140	Transistor, 2SA817-Y
Q704	A6314440	Transistor, 2SC1627-Y
Q705	A6314440	Transistor, 2SC1627-Y
Q706	A6531140	Transistor, 2SA817-Y
Q707	A6869040	Transistor, 2SD1407A-Y
Q707B	23035310	Screw, BTB3X10SZN
Q708	A6640600	Transistor, 2SB1016A-Y
Q708B	23035310	Screw, BTB3X10SZN
Q711	23319808	IC, M5218AP
Q712	A6317440	Transistor, 2SC1815-Y
Q713	A6531140	Transistor, 2SA817-Y
Q714	A6314440	Transistor, 2SC1627-Y
Q715	A6314440	Transistor, 2SC1627-Y
Q716	A6531140	Transistor, 2SA817-Y
Q717	A6869040	Transistor, 2SD1407A-Y
Q717B	23035310	Screw, BTB3X10SZN
Q718	A6640600	Transistor, 2SB1016A-Y
Q718B	23035310	Screw, BTB3X10SZN
Q722	A6317440	Transistor, 2SC1815-Y
Q723	A6531140	Transistor, 2SA817-Y
Q724	A6314440	Transistor, 2SC1627-Y
Q725	A6314440	Transistor, 2SC1627-Y
Q726	A6531140	Transistor, 2SA817-Y
Q727	A6869040	Transistor, 2SD1407A-Y
Q727B	23035310	Screw, BTB3X10SZN
Q728	A6640600	Transistor, 2SB1016A-Y
Q728B	23035310	Screw, BTB3X10SZN
Q732	A6317440	Transistor, 2SC1815-Y
Q733	A6531140	Transistor, 2SA817-Y
Q734	A6314440	Transistor, 2SC1627-Y
Q735	A6314440	Transistor, 2SC1627-Y
Q736	A6531140	Transistor, 2SA817-Y
Q737	A6869040	Transistor, 2SD1407A-Y
Q737B	23035310	Screw, BTB3X10SZN
Q738	A6640600	Transistor, 2SB1016A-Y
Q738B	23035310	Screw, BTB3X10SZN
Q741	23319808	IC, M5218AP
Q742	A6317440	Transistor, 2SC1815-Y
Q743	A6531140	Transistor, 2SA817-Y
Q744	A6314440	Transistor, 2SC1627-Y
Q745	A6314440	Transistor, 2SC1627-Y
Q746	A6531140	Transistor, 2SA817-Y
Q747	A6869040	Transistor, 2SD1407A-Y
Q747B	23035310	Screw, BTB3X10SZN
Q748	A6640600	Transistor, 2SB1016A-Y
Q748B	23035310	Screw, BTB3X10SZN
Q749	A6314440	Transistor, 2SC1627-Y
Q750	A6314440	Transistor, 2SC1627-Y
Q751	A6531140	Transistor, 2SA817-Y
Q752	A6317440	Transistor, 2SC1815-Y
Q753	A6531140	Transistor, 2SA817-Y
Q754	23904521	IC, AN7805
Q754B	70391356	Screw, BITTB3X10 SZN
Q755	23904525	IC, AN7809
Q755B	70391356	Screw, BITTB3X10 SZN
Q756	23318841	IC, AN79M09F
Q756B	70391356	Screw, BITTB3X10 SZN
Q757	A6317440	Transistor, 2SC1815-Y
Q758	A6317440	Transistor, 2SC1815-Y
Q759	A6534040	Transistor, 2SA1015-Y
Q760	A6869040	Transistor, 2SD1407A-Y
Q760B	23035310	Screw, BTB3X10SZN
Q761	A6534040	Transistor, 2SA1015-Y
Q762	A6317440	Transistor, 2SC1815-Y
Q763	A6534145	Transistor, 2SA1020-Y(C)
Q764	B0487045	IC, TC74HC4049AP
Q765	A6640600	Transistor, 2SB1016A-Y
Q765B	23035310	Screw, BTB3X10SZN
Q766	A6317440	Transistor, 2SC1815-Y
Q767	B0470188	IC, TC4066BP(N)
Q768	A6534040	Transistor, 2SA1015-Y
Q769	A6317440	Transistor, 2SC1815-Y
Q770	A6534040	Transistor, 2SA1015-Y
Q771	A6533730	Transistor, 2SA1012-Y
Q771B	23035308	Screw, BTB3X8SZN
Q771C	23960136	Adhesive, TSE3843-W
Q772	A6534040	Transistor, 2SA1015-Y
Q773	A6317440	Transistor, 2SC1815-Y
Q774	A6317440	Transistor, 2SC1815-Y
Q775	A6531140	Transistor, 2SA817-Y
Q776	A6002020	Transistor, RN1202
D704	23115599	Diode, 1N4148
D705	23115599	Diode, 1N4148
D714	23115599	Diode, 1N4148
D715	23115599	Diode, 1N4148
D724	23115599	Diode, 1N4148
D725	23115599	Diode, 1N4148
D734	23115599	Diode, 1N4148
D735	23115599	Diode, 1N4148
D744	23115599	Diode, 1N4148
D745	23115599	Diode, 1N4148
D754	23115599	Diode, 1N4148
D755	23115599	Diode, 1N4148
D760	23115599	Diode, 1N4148
D761	23316666	Diode, Zener, MTZJ4.7B
D762	23316675	Diode, Zener, MTZJ6.2B
D763	23115599	Diode, 1N4148
D764	23115599	Diode, 1N4148
D767	23115599	Diode, 1N4148
D768	23316675	Diode, Zener, MTZJ6.2B
D769	23316675	Diode, Zener, MTZJ6.2B
D798	23115599	Diode, 1N4148
D799	23115599	Diode, 1N4148
D7701	23115599	Diode, 1N4148
D7702	23316766	Diode, RU2YX, LF-C1
D7703	23115599	Diode, 1N4148
D7705	23115599	Diode, 1N4148
D7706	23115599	Diode, 1N4148
D7707	23115599	Diode, 1N4148
D7708	23115599	Diode, 1N4148
D7709	23316675	Diode, Zener, MTZJ6.2B

Location No.	Part No.	Description
D7710	23316716	Diode, Zener, MTZJ11B
D7711	23316716	Diode, Zener, MTZJ11B
D7717	23316675	Diode, Zener, MTZJ6.2B
D7718	23316675	Diode, Zener, MTZJ6.2B
D7719	23316675	Diode, Zener, MTZJ6.2B
D7720	23316675	Diode, Zener, MTZJ6.2B
D7721	23316675	Diode, Zener, MTZJ6.2B
D7722	23316675	Diode, Zener, MTZJ6.2B
D7725	23115599	Diode, 1N4148
MISCELLANEOUS		
P708	23902863	Socket, 20P
P709	23902863	Socket, 20P
P713	23164787	Plug, 7P
P714	23164787	Plug, 7P
P715	23164787	Plug, 7P
P720	23164786	Plug, 6P
PC BOARD ASSEMBLIES		
* U909	23785664	Conver Board, PB9836A

Location No.	Part No.	Description

CONVER BOARD PB9836A

BOTTOM (FOIL) SIDE



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TOSHIBA

FILE NO. 033-9901
SUPPLEMENT

SERVICE MANUAL

COLOUR TELEVISION

C9SS (C9PJ) Chassis

50PJ98B, 50PJ98G

- SUMMARY -

This supplement covers the added Replacement Parts List and PC Board bottom view for above models.
Use this service manual together with the original service manual 50PJ98B, 50PJ98G (File No. 030-9915).

PRINTED IN JAPAN, Oct., 1999 So

REPLACEMENT PARTS LIST DIFFERENCES

*This table shows difference replacement parts list to the 50PJ98G for 50PJ98B.

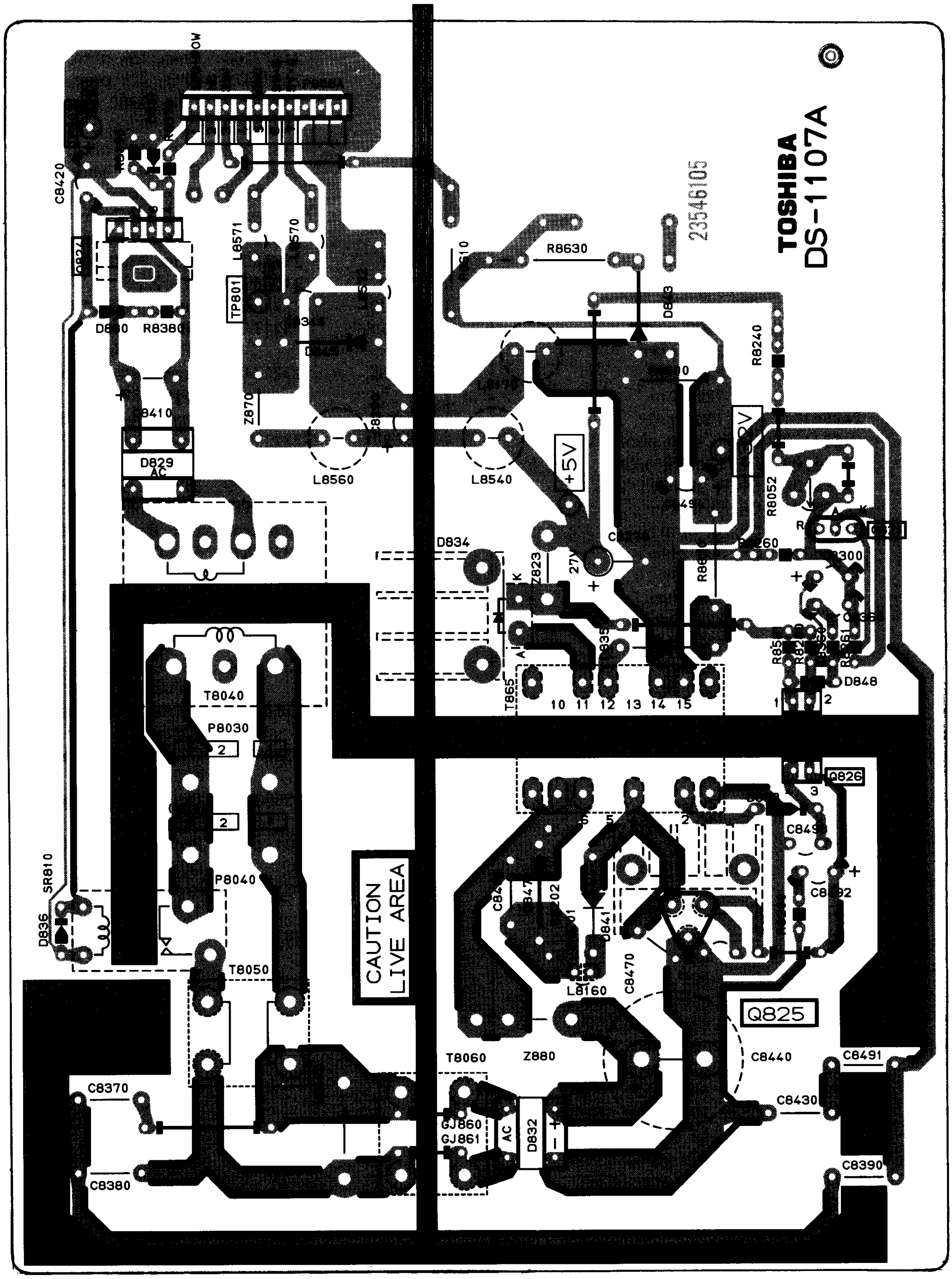
Location No.	Part No.	Description
A410	23550641	Label, Model No.
C283	24794100	EL, 10μF, ±20%, 16V
C284	24794100	EL, 10μF, ±20%, 16V
C8270	24617810	EL, 4700μF, ±20%, 35V
C8290	24617026	EL, 820μF, ±20%, 16V
C8300	24617816	EL, 10μF, ±20%, 50V
C8370	24092553	CD, 470pF, ±20%, AC250V
C8380	24092553	CD, 470pF, ±20%, AC250V
C8390	24092553	CD, 470pF, ±20%, AC250V
C8400	24082373	PF, 0.1μF, ±20%, AC250V
C8410	24617806	EL, 470μF, ±20%, 35V
C8420	24617794	EL, 47μF, ±20%, 25V
C8430	24092555	CD, 1000pF, ±20%, AC250V
C8440	24086044	EL, 47μF, ±20%, 450V
C8450	24232103	CD, 0.01μF, +80%, -20%
C8470	24215101	CD, 100pF, ±10%, 1000V
C8490	24567104	PF, 0.1μF
C8491	24092555	CD, 1000pF, ±20%, AC250V
C8492	24617794	EL, 47μF, ±20%, 25V
C8493	24567104	PF, 0.1μF
C8494	24640893	EL, 47μF, ±20%, 100V
C8495	24820103	PF, 0.01μF, 630V
CA80	24666470	EL, 47μF, ±20%, 16V
CA81	24232103	CD, 0.01μF, +80%, -20%
CA82	24085981	EL, 10μF, ±20%, 16V, Non-Polar
CA83	24085981	EL, 10μF, ±20%, 16V, Non-Polar
CB30	24794100	EL, 10μF, ±20%, 16V
CB31	24232103	CD, 0.01μF, +80%, -20%
CB32	24567474	PF, 0.47μF
CB33	24212472	CD, 4700pF, ±10%
CB37	24436150	CD, 15pF
CB40	24232103	CD, 0.01μF, +80%, -20%
CB45	24232103	CD, 0.01μF, +80%, -20%
CB46	24794100	EL, 10μF, ±20%, 16V
CF02	24774220	Chip, 22pF, CH
CF03	24774220	Chip, 22pF, CH
CF05	24092293	CD, 0.01μF, +80%, -20%, 16V
CF06	24092293	CD, 0.01μF, +80%, -20%, 16V
CF07	24814103	Chip, 0.01μF, +80%, -20%
CF08	24092293	CD, 0.01μF, +80%, -20%, 16V
CF09	24567224	PF, 0.22μF
CF10	24814103	Chip, 0.01μF, +80%, -20%
CF11	24202101	EL, 100μF, ±20%, 10V
CF12	24202101	EL, 100μF, ±20%, 10V
CF13	24202101	EL, 100μF, ±20%, 10V
CF14	24202101	EL, 100μF, ±20%, 10V
CF17	24781101	CD, 100pF, SL
CF18	24092293	CD, 0.01μF, +80%, -20%, 16V
CF19	24092293	CD, 0.01μF, +80%, -20%, 16V
CF20	24092293	CD, 0.01μF, +80%, -20%, 16V
CF21	24092293	CD, 0.01μF, +80%, -20%, 16V
CF22	24092293	CD, 0.01μF, +80%, -20%, 16V
CF24	24814103	Chip, 0.01μF, +80%, -20%
CF25	24092293	CD, 0.01μF, +80%, -20%, 16V
CF31	24797100	EL, 10μF, ±20%, 50V
CF32	24814103	Chip, 0.01μF, +80%, -20%
CF33	24202101	EL, 100μF, ±20%, 10V
CF41	24774060	Chip, 6pF, ±0.5pF, CH
CF42	24774060	Chip, 6pF, ±0.5pF, CH
CF43	24092293	CD, 0.01μF, +80%, -20%, 16V
CF60	24092293	CD, 0.01μF, +80%, -20%, 16V
CF61	24092293	CD, 0.01μF, +80%, -20%, 16V
D829	23316962	Diode, S1WBA20 4101
D830	23316745	Diode, Zener, MTZJ27A
D831	23316672	Diode, Zener, MTZJ5.6B
D832	23357207	Diode, LN1WBA60
D833	23118057	Diode, AG01A
D834	23357013	Diode, D5S9M
D835	23118056	Diode, AG01
D836	23316674	Diode, Zener, MTZJ6.2A
D841	23316381	Diode, RU1P LF-A5
D843	23118126	Diode, 1Z30A
D845	23115885	Diode, 1Z7.5
D847	23118340	Diode, 1Z80FA
D848	23115599	Diode, 1N4148
DA02	23115599	Diode, 1N4148
DA03	23115599	Diode, 1N4148
DB37	23118859	Diode, 1SS133
K902	23306327	Remote Hand Unit, CT-90006
L8160	23103961	Coil (Ferrite Bead), TBF253D-02
L8170	23280016	Coil, Peaking, TRF4100AZ
L8540	23280016	Coil, Peaking, TRF4100AZ
L8560	23280016	Coil, Peaking, TRF4100AZ
L8570	23103859	Coil (Ferrite Bead), TEM2011
L8571	23103859	Coil (Ferrite Bead), TEM2011
L8572	23103859	Coil (Ferrite Bead), TEM2011
LB30	23289100	Coil, Peaking, TRF4100AF
LF01	23289100	Coil, Peaking, TRF4100AF
LF02	23289109	Coil, Peaking, TRF41R0AF
LF10	23289100	Coil, Peaking, TRF4100AF
LF20	23238506	Coil, Peaking, TRF4229AJ
LF21	23238714	Coil, Peaking, TRF4100AJ
LF22	23238562	Coil, Peaking, TRF4109AJ
LF23	23238562	Coil, Peaking, TRF4109AJ
LF24	23238562	Coil, Peaking, TRF4109AJ
LF25	23238506	Coil, Peaking, TRF4229AJ
LF26	23238506	Coil, Peaking, TRF4229AJ
LF27	23238506	Coil, Peaking, TRF4229AJ
LF28	23238506	Coil, Peaking, TRF4229AJ
LF29	23238714	Coil, Peaking, TRF4100AJ
LF30	23238714	Coil, Peaking, TRF4100AJ
LF31	28289100	Coil, Peaking, TRF4100AF
⚠P801	23372014	Power Cord
P8030	23164966	Plug, 3P
P8040	23164966	Plug, 3P
P806A	23368581	Plug, 7P
P806B	23368581	Plug, 7P
Q110	23114460	Transistor, RN1204
Q111	23114460	Transistor, RN1204
Q821	23318113	IC, TL431CLPB
Q824	23904273	IC, PQ05RF11
Q825	23906695	IC, MIP0224SY
⚠Q826	23904488	Photo Coupler, TLP621(GRL-F
QA01	23000213	IC, CXP750010-112S
QA82	23904943	IC, MM1111XS
QA83	23114460	Transistor, RN1204
QB30	23906946	IC, CM0016AD
QF01	23906551	IC, SDA5275-3P
QF02	23906927	IC, SAB-C161RI

Location No.	Part No.	Description
QF03	23906550	IC, AM29F040B-1
QF04	23906926	IC, AM29F040B-70
QF05	23000039	IC, AT24C08N10SC
QF10	23000056	IC, HY5117404BJ
QF31	23314475	Transistor, 2SC2712-Y
QF32	70114402	Transistor, 2SC3437Y-L
QF33	23314475	Transistor, 2SC2712-Y
QF34	23314475	Transistor, 2SC2712-Y
QF35	23314475	Transistor, 2SC2712-Y
R110	24366821	CF, 820 ohm
R111	24366821	CF, 820 ohm
R8200	24366560	CF, 56 ohm
R8201	24383154	OMF, 120k ohm, 2W
R8240	24000529	MF, 6800 ohm, 1/4W
R8260	24000529	MF, 6800 ohm, 1/4W
R8261	24366473	CF, 47k ohm
R8280	24366222	CF, 2200 ohm
R8370	24366222	CF, 2200 ohm
R8380	24366223	CF, 22k ohm
R8390	24366123	CF, 12k ohm
R8581	24366151	CF, 150 ohm
R8610	24554122	OMF, 1200 ohm, 2W
R8620	24546209	FR, 2 ohm, 1/2W
R8630	24554102	OMF, 1k ohm, 2W
RA05	24366102	CF, 1k ohm
RA27	24366102	CF, 1k ohm
RA29	24366331	CF, 330 ohm
RA64	24366102	CF, 1k ohm
RA82	24366103	CF, 10k ohm
RA410	24366273	CF, 27k ohm
RB30	24366105	CF, 1M ohm
RB31	24366102	CF, 1k ohm
RB32	24366332	CF, 3300 ohm
RB33	24366332	CF, 3300 ohm
RB35	24366102	CF, 1k ohm
RB36	24366102	CF, 1k ohm
RB37	24366221	CF, 220 ohm
RB38	24366331	CF, 330 ohm
RB39	24366331	CF, 330 ohm
RB50	24366101	CF, 100 ohm
RF01	24872103	Chip, 10k ohm, 1/16W
RF02	24872153	Chip, 15k ohm, 1/16W
RF03	24872103	Chip, 10k ohm, 1/16W
RF04	24872102	Chip, 1k ohm, 1/16W
RF05	24872682	Chip, 6800 ohm, 1/16W
RF06	24872223	Chip, 22k ohm, 1/16W
RF07	24872332	Chip, 3300 ohm, 1/16W
RF09	24872683	Chip, 68k ohm, 1/16W
RF10	24872103	Chip, 10k ohm, 1/16W
RF11	24872471	Chip, 470 ohm, 1/16W
RF12	24872104	Chip, 100k ohm, 1/16W
RF16	24872152	Chip, 1500 ohm, 1/16W
RF17	24872102	Chip, 1k ohm, 1/16W
RF18	24872103	Chip, 10k ohm, 1/16W
RF19	24872102	Chip, 1k ohm, 1/16W
RF20	24872101	Chip, 100 ohm, 1/16W
RF21	24872101	Chip, 100 ohm, 1/16W
RF22	24872101	Chip, 100 ohm, 1/16W
RF23	24872101	Chip, 100 ohm, 1/16W
RF24	24872332	Chip, 3300 ohm, 1/16W
RF25	24872332	Chip, 3300 ohm, 1/16W
RF31	24872103	Chip, 10k ohm, 1/16W
RF32	24872103	Chip, 10k ohm, 1/16W
RF33	24872103	Chip, 10k ohm, 1/16W

Location No.	Part No.	Description
RF34	24872103	Chip, 10k ohm, 1/16W
RF36	24872103	Chip, 10k ohm, 1/16W
RF37	24872103	Chip, 10k ohm, 1/16W
RF38	24872103	Chip, 10k ohm, 1/16W
RF41	24872103	Chip, 10k ohm, 1/16W
RF42	24872473	Chip, 47k ohm, 1/16W
RF43	24872332	Chip, 3300 ohm, 1/16W
RF44	24872332	Chip, 3300 ohm, 1/16W
RF45	24872103	Chip, 10k ohm, 1/16W
RF46	24872471	Chip, 470 ohm, 1/16W
RF47	24000824	Chip, Jumper, 2125 type
RF49	24366472	CF, 4700 ohm
RF51	24872103	Chip, 10k ohm, 1/16W
RF52	24872332	Chip, 3300 ohm, 1/16W
RR99	24436220	CD, 22pF
SR810	23146572	Relay, DG5D1-O(M)-2
T865	23217422	Transformer, Power, TPW3418AM
T8040	23217432	Transformer, Power, TPW1562AZ
T8050	23211661	Line Filter, TRF3192
T8060	23211661	Line Filter, TRF3192
* U902A	23783508	Signal Board, PB8766D
* U903A	23783509	MICRO Board, PB8767D-1
* U903B	23783510	DPC Board, PB8767D-2
* U904	23783542	DEF Board, PB8776C
* U906A	23783512	TEXT Board, PB8825B
* U913	23783511	Power Board, PB8992A
XF02	23153394	Crystal, 16.000000MHz
Y101E	23563758	Owner'S Manual, English, 50PJ98G
Y101F	23563759	Owner'S Manual, French, 50PJ98G
Y101G	23563760	Owner'S Manual, German, 50PJ98G
Y101I	23563761	Owner'S Manual, Itarian, 50PJ98G
Y101S	23563762	Owner'S Manual, Spanish, 50PJ98G
Z823	23144608	Protector, PRF40005PRT, DC60V, 4.0A
Z870	23144539	Protector, PRF20005491, 125V, 2.0A
Z880	23144603	Protector, PRF10005PRT

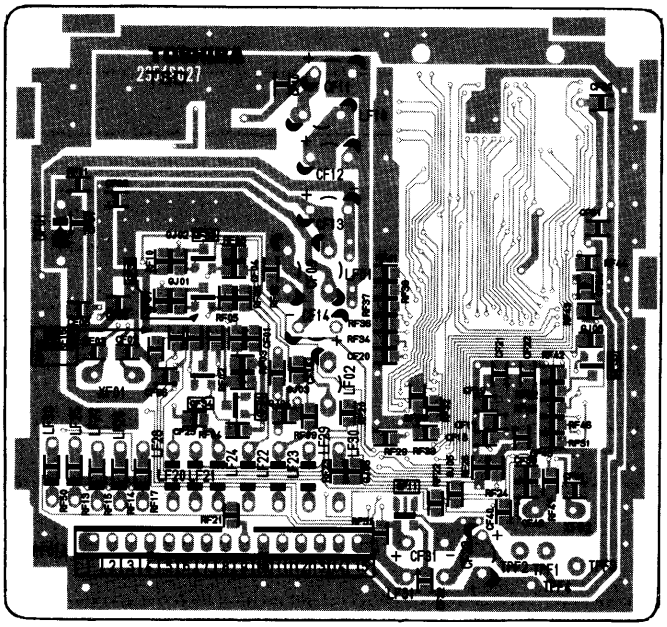
EPG-POWER BOARD PB8992A

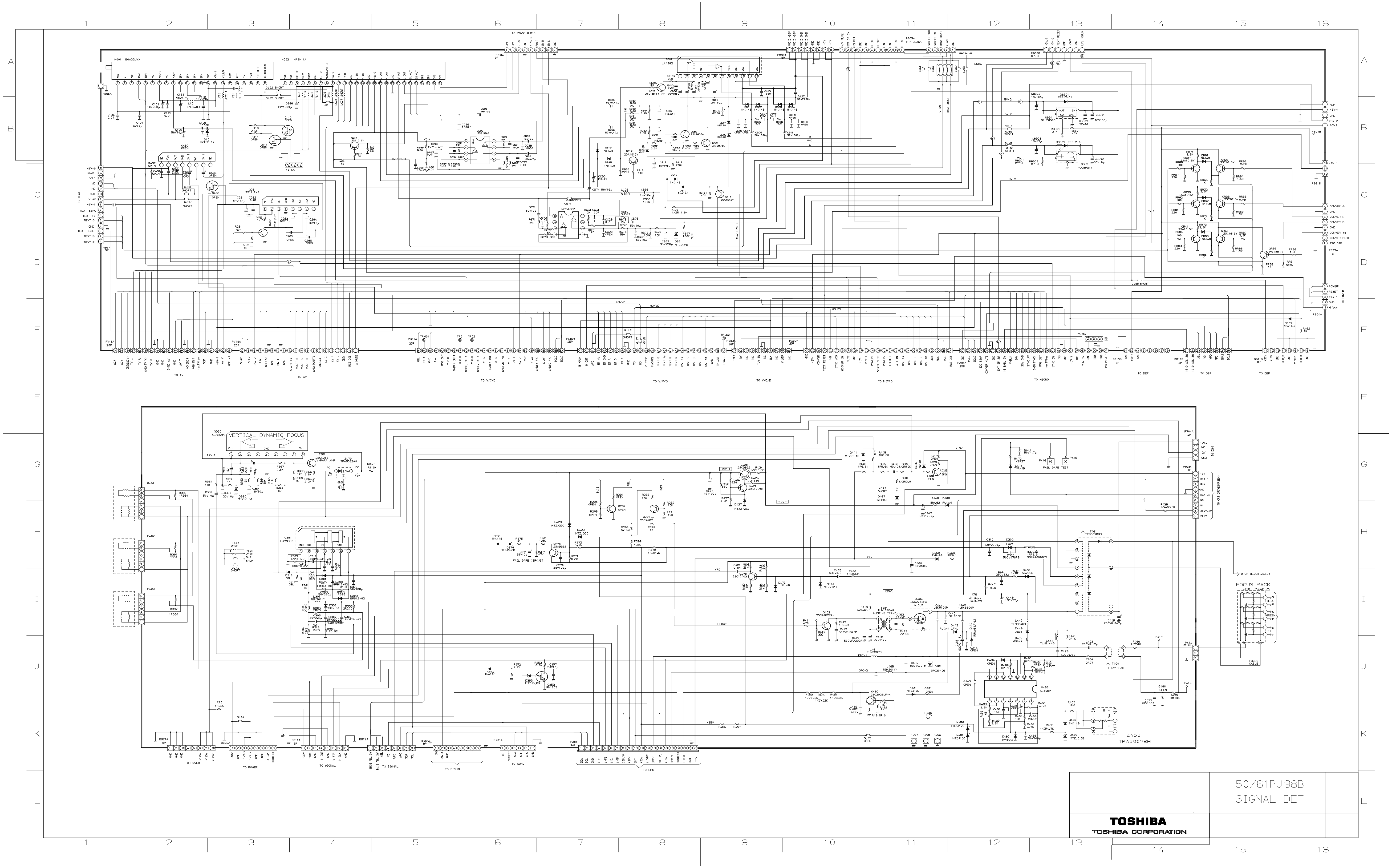
BOTTOM (FOIL) SIDE


TOSHIBA
DS-1107A
23546105
C8420
D824
D830
R8380
D829
AC
L8571
L8570
TP801
Z870
L8560
L8540
+5V
R8630
R8240
R8052
D834
Z823
27V
T8040
P8030
P8040
SR810
D836
T8050
CAUTION
LIVE AREA
C8370
C8380
T8060
Z880
GJ860
GJ861
D832
L8160
C8470
Q825
Q826
D848
T865
10
11
12
13
14
15
C8440
C8491
C8430
C8390

EPG-TEXT BOARD PB8825B

BOTTOM (FOIL) SIDE




VERTICAL DYNAMIC FOCUS
TO POW2 AUDIO
TO AV
TO V/C/D
TO MICRO
TO DEF
TO POWER
TO SIGNAL
TO CONV
TO DFC
TO TEXT
FOCUS PACK
FOCUS CABLE
TO CRT DRIVE(GREEN)
TO CR BLOCK(Z450)
FAIL SAFE CIRCUIT
FAIL SAFE TEST
H-DRIVE TRANS
Z450
TPA5007BH
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
A
B
C
D
E
F
G
H
I
J
K
L

50/61PJ98B
SIGNAL DEF

TOSHIBA
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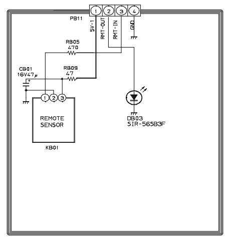
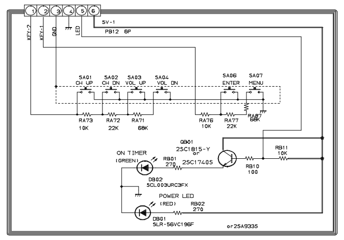
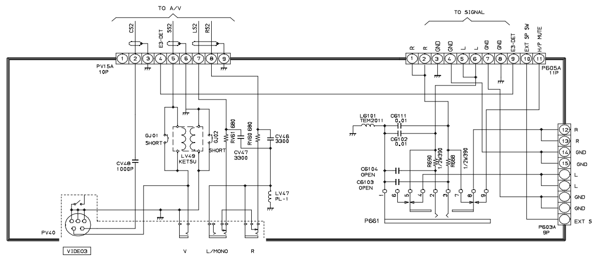
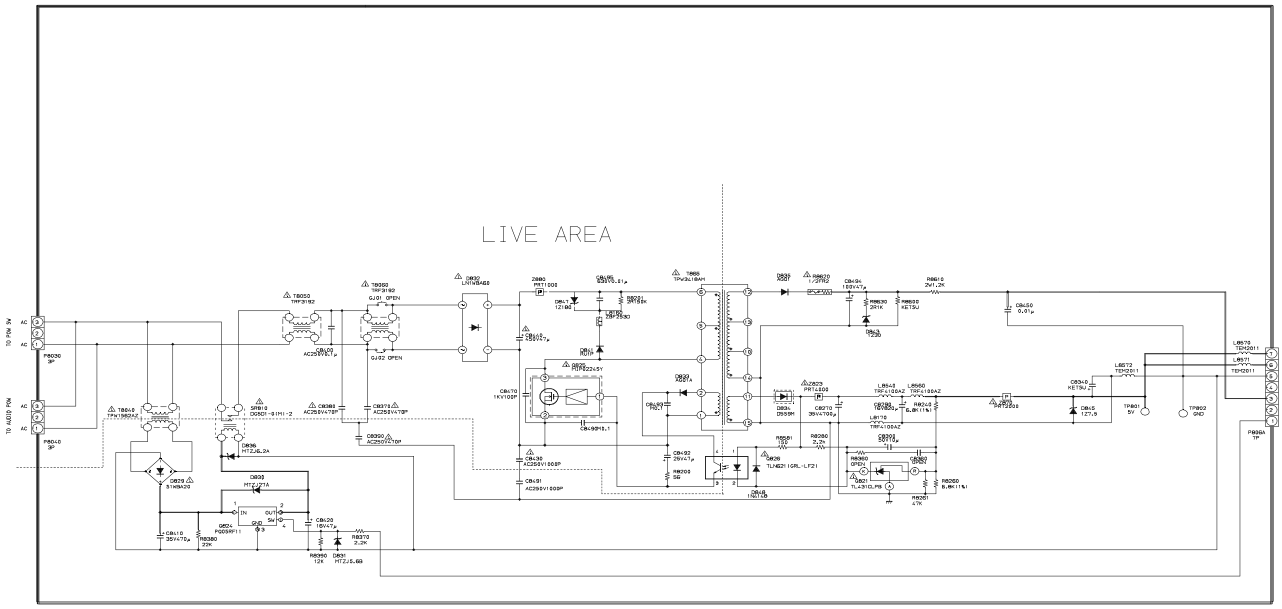

TO MICRO
P811
REMOTE SENSOR
D803

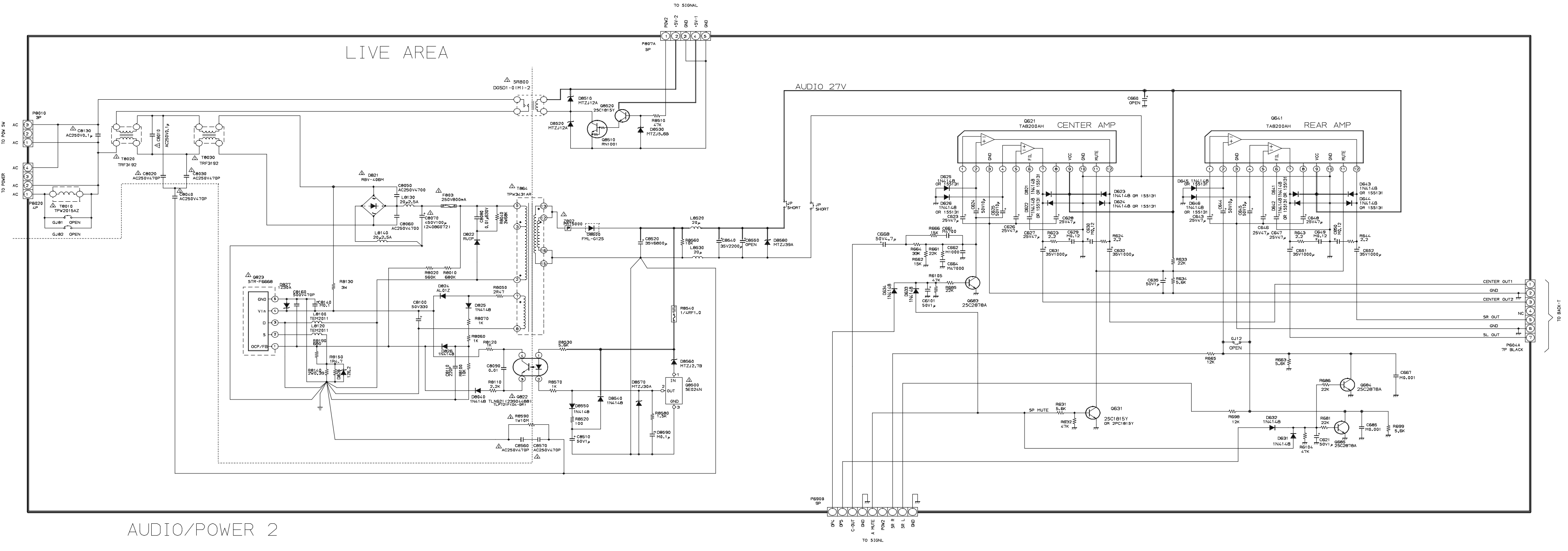

TO MICRO
P812 8P
ON TIMER
POWER LED

RMT IN UNIT PB8488-1 M042Z FRONT CONT UNIT PB8488-2


TO A/V
TO SIGNAL
VIDEO
V
L/MONO
R


LIVE AREA
TO POW SW
TO AUDIO POW
EPG POWER
TO SIGNAL

EPG-POW


TO SIGNAL
LIVE AREA
AUDIO 27V
CENTER AMP
REAR AMP
TA8205AH
TO POWER
CENTER OUT1
CENTER OUT2
SR OUT
SL OUT
GND
TO BACK-T
P690B
9P
OP4
OP5
C-OUT
GND
A MUTE
POW2
SR R
SR L
GND
TO SIGNL

AUDIO/POWER 2

1. RESISTOR Resistance is shown in ohm [K = 1.000. M = 1.000.000]. All resistors sre 1/6W and 5% tolerance carbon resistor.unless otherwise noted as the following marks.

1/2R : Metal or Metal oxide of 1/2 watt	1/2S : Solid of 1/2 watt
1RF : Fuse resistor of 1 watt	10W : Cement of 10 watts

K = ±10% G = ±2% F = ±1%

2.CAPACITOR Unless otherwise noted in schematic.all capacitor valuse less than 1 are expressed in μF.and the values more than 1 in pF.
All capacitors are ceramic 50V. unless otherwise noted as the following marks.

Electrolitic capacitor   Mylar capacitor

3. The parts indicated with "⚠" have specialcharacteristics should be replaced with identical parts only.

4. This schematic diagram is the latest the time of copying. so it must be changet in acordance with all informed modification notices.

TOSHIBA
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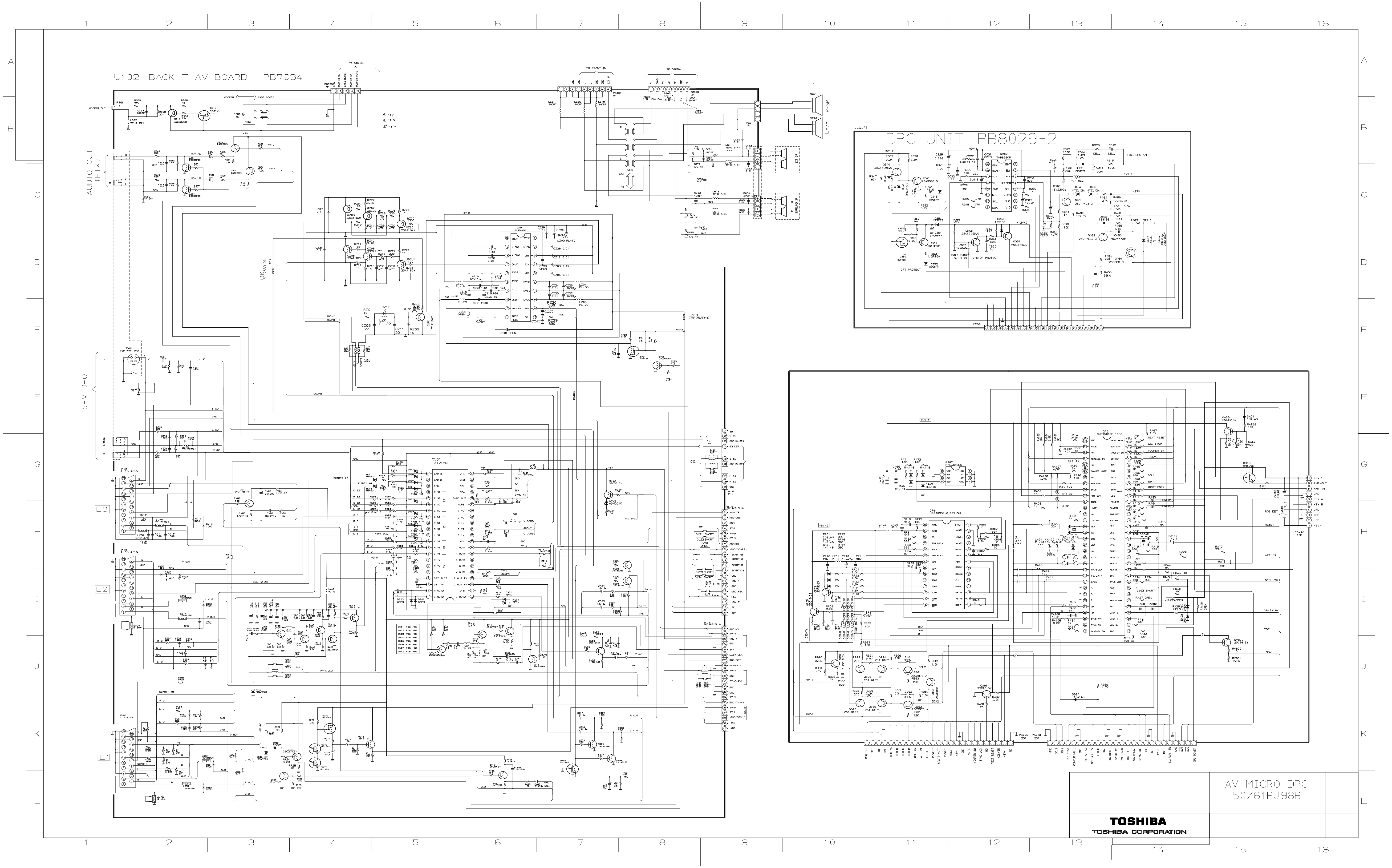
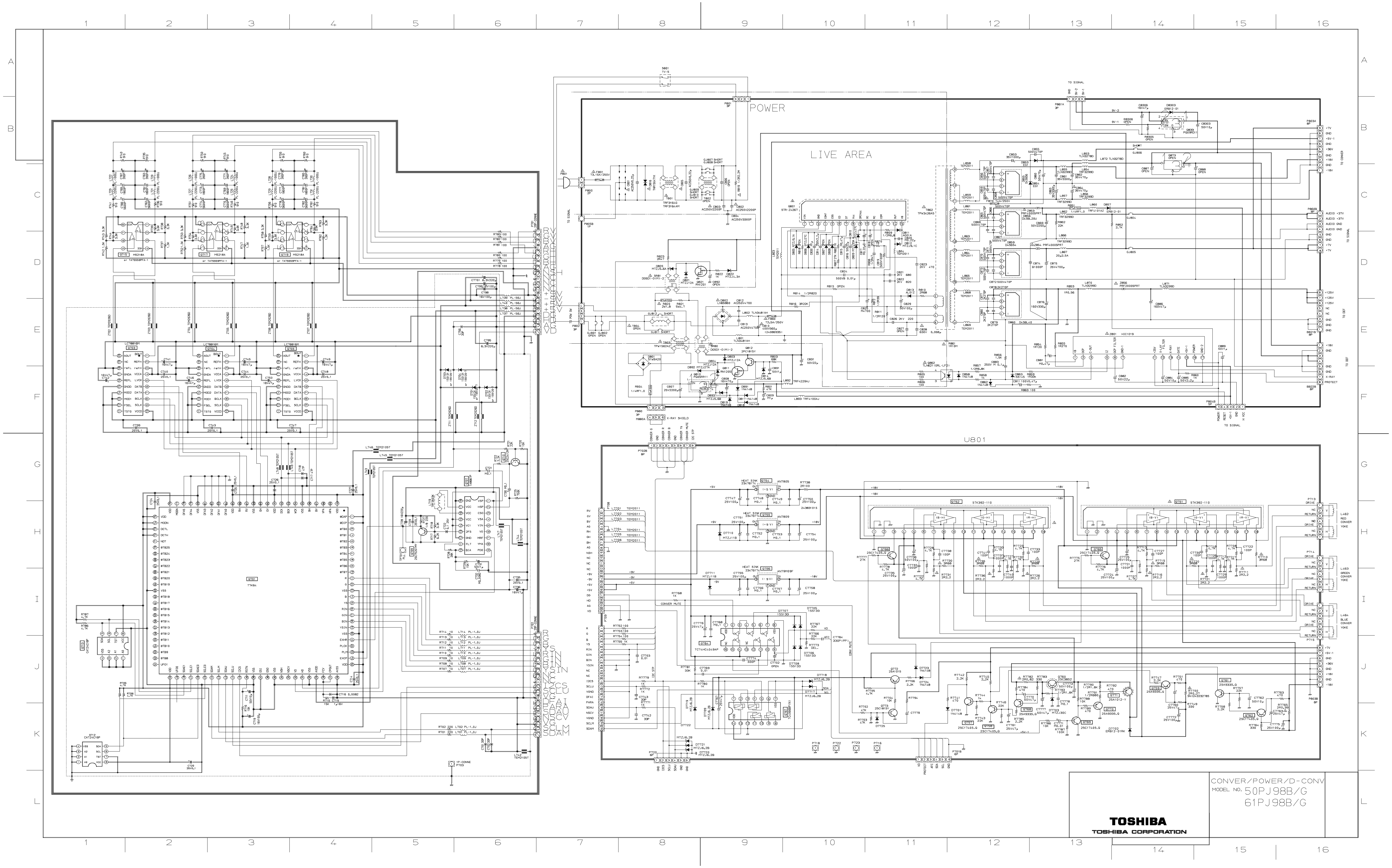
50PJ98B/G
61PJ98B/G
FRONT,EPG-POW
AUDIO/POWER2


U102 BACK-T AV BOARD PB7934
U421
DPC UNIT PB8029-2
AUDIO OUT (FIX)
S-VIDEO
E3
E2
E1
R-SP
L-SP
EXT SP
TO SIGNAL
TO FRONT IN
QV01 TA1218N
GND
SCL2
SDA2
I2C STOP
CONVER MUTE
EXT SP SW
16:9ABL SW
V-BLK
SGV
SGV(GND)
SYNC AV
SYNC(GND)
RGB DET
nexTView
SYNC SW
VD
+5V-2
TOF
14:9ABL SW
SW1
SW0
EPG POWER
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
A
B
C
D
E
F
G
H
I
J
K
L

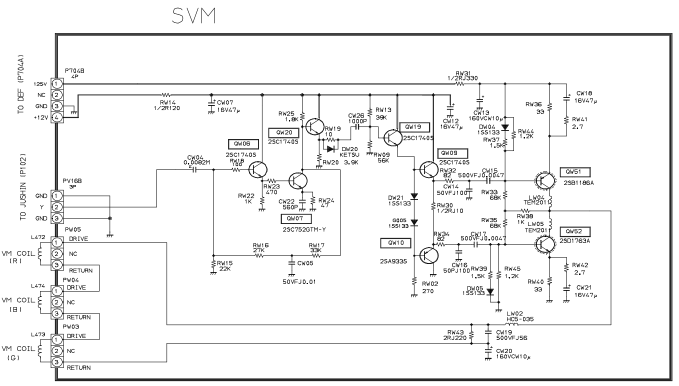
AV MICRO DPC
50/61PJ98B

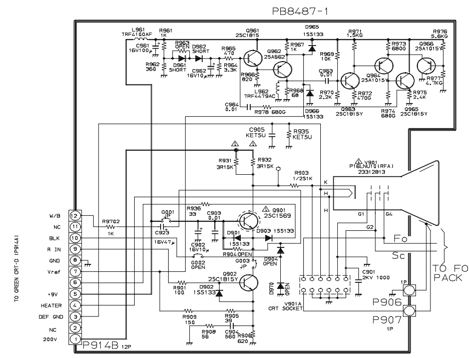
TOSHIBA
TOSHIBA CORPORATION

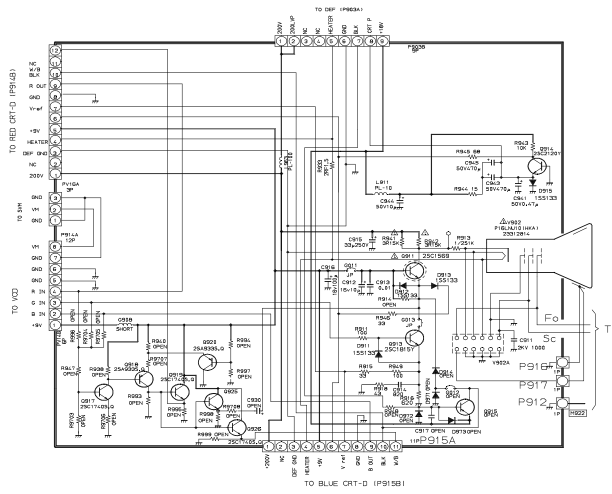

POWER
LIVE AREA
U801
TO SIGNAL
TO CONVER
TO DEF
X-RAY SHIELD
STK392-110
RED CONVER YOKE
GREEN CONVER YOKE
BLUE CONVER YOKE

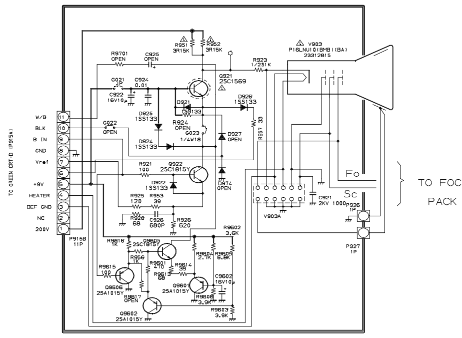
CONVER/POWER/D-CONV
MODEL NO. 50PJ98B/G
61PJ98B/G

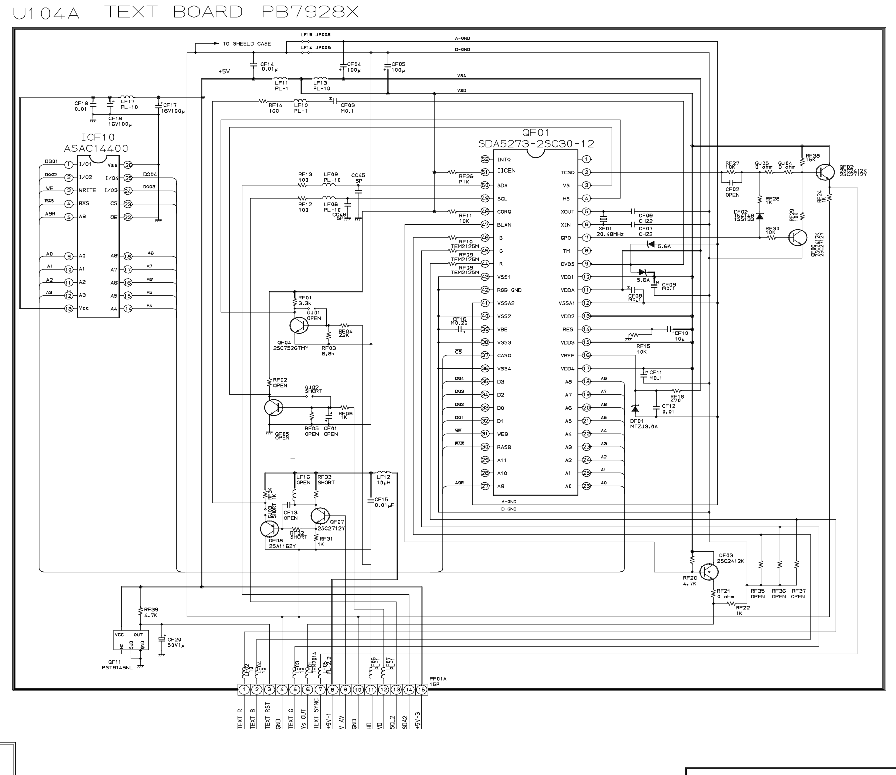
TOSHIBA
TOSHIBA CORPORATION


SVM
TO DEF (P756A)
TO JUNGIN (P102)
TO VM COIL (R)
TO VM COIL (B)
TO VM COIL (G)
DRIVE
RETURN
NC


PB8487-1
TO GREEN CRT-D (P914A)
P914B
TO FOCUS PACK
Fo
Sc
P906
P907


TO DEF (P853A)
TO RED CRT-D (P914B)
TO SVM
TO VCD
TO FOCUS PACK
Fo
Sc
P916
P917
P912
P915A
TO BLUE CRT-D (P915B)


TO GREEN CRT-D (P914A)
TO FOCUS PACK
Fo
Sc


U104A TEXT BOARD PB7928X
ICF10
ASAC14400
QF01
SDA5273-2SC30-12
TO SHIELD CASE
+5V

NOTE:

1. RESISTOR Resistance is shown in ohm [K = 1.000. M = 1.000.000]. All resistors sre 1/6W and 5% tolerance carbon resistor.unless otherwise noted as the following marks.

1/2R : Metal or Metal oxide of 1/2 watt | 1/2S : Solid of 1/2 watt
1RF : Fuse resistor of 1 watt | 10W : Cement of 10 watts

K = ±10% G = ±2% F = ±1%

2.CAPACITOR Unless otherwise noted in schematic.all capacitor valuse less than 1 are expressed in μF.and the values more than 1 in pF.
All capacitors are ceramic 50V. unless otherwise noted as the following marks.

Electrolitic capacitor | Mylar capacitor

3. The parts indicated with "⚠" have specialcharacteristics should be replaced with identical parts only.

4. This schematic diagram is the latest the time of copying. so it must be changet in acordance with all informed modification notices.

TOSHIBA
TOSHIBA CORPORATION

50/61PJ98B
CRT-D R G B
SVM TEXT